

New Ideals in the Planning of Cities, Towns and Villages

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Town and City Planner

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THIS book on New Ideals in the Planning of Cities, Towns and Villages was prepared and set in type as one of a series for the Overseas Army, A. E. F., by the Department of Citizenship, Army Educational Commission. Before it was actually printed, word was received from France to send over no more materials, because the men in the overseas service were being so rapidly returned to their homes.

The purpose of the book, however, remains; *viz.*, "to present fundamental principles, and stimulate intelligent study of the problems of citizenship." Under these circumstances, it seemed desirable to complete its publication at once, and arrange for its circulation. The American City Bureau has responded to this call, and agreed to coöperate in a program looking toward the fulfillment, so far as possible, of the original purpose of the handbook. In taking this action, the American City Bureau is giving one more expression to its wide and sound interest in everything that affects vitally the welfare of cities, towns and villages.

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New Ideals in the Planning of Cities, Towns and Villages

PART I

Replanning American Cities

THE cities of the United States have not yet made many of those public improvements that are so essential to modern life, especially for the new era. Their streets are still obstructed and rendered dangerous as well as unsightly by poles and wires; school grounds are usually too small and undeveloped; playgrounds are inadequate in number and size; waterfronts are unattractive, wastefully administered, and mostly in private hands; parks are detached tracts of land, unrelated one to the other. American cities have not yet solved the serious problems related to railroad approaches and terminals and the elimination of grade crossings. They have not yet acted comprehensively with regard to the main thoroughfares for traffic or pleasure driving or street extensions in general. In a word, they have not yet applied in a businesslike and economical manner the methods characteristic of the modern city planning movement. Therefore the American city still suffers in many ways from haphazard, piecemeal and shortsighted procedure.

THE NEW CIVIC SPIRIT

Nothing is more marked than the steadily increasing attention to every influence affecting the improvement of city life. This is due partly to the unprecedented growth of urban communities, partly to the vastly greater complexity of modern city life, partly to evils resulting from the lack of skill and experience in planning and constructing American

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BRIDGE ACROSS THE MISSISSIPPI RIVER AT ST. LOUIS, MO.

This bridge was a factor in the civic isolation of East St. Louis. Although built to relieve St. Louis from high freight rates, citizens refused for years to vote for the completion of the Free Bridge, fearing railroad control of the Illinois approach

cities, but especially to the new civic spirit. Public opinion on this subject is at last aroused. Throughout the United States, civic, commercial and other organizations have undertaken to cope vigorously with the problem of improving cities.

In the awakening to the imperative need of a different and better method of city making, the United States is following the precedent of other nations. Continental European cities decades ago, and English and South American cities more recently, changed radically their municipal regulations and their methods of building cities. The splendid

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results of their activity are now apparent to every visitor and citizen. Transportation and highway systems, waterfronts, harbors and docks, industrial and commercial development, public recreation, better homes, particularly for families of small means — such great municipal subjects as these have been handled with skill and experience supported by law and public authority. This widespread civic awakening is no vague movement, with vague and indefinite aims. It seeks to provide convenience in streets and buildings, to meet the requirements of public health, to recognize the true function and place of art, to regard obligations to future generations, to supply the imperative needs of children, to satisfy the love of nature and the desire for outdoor life. But the form of this civic awakening that is most significant and promising is the recognition of the need of comprehensive planning and replanning, especially of the smaller cities. City planning, let it be understood, is not a movement to make cities beautiful in a superficial sense. Its purposes are fundamental. It aims consciously to provide those facilities that are for the common good, that concern everybody; it seeks to save waste, the almost incalculable waste due to unskilful and planless procedure, for by doing things at the right time and in the right way comprehensive city planning saves far more than its cost.

MAIN DIVISIONS OF CITY PLANNING

The two main divisions of city planning are: first, cities and towns planned in advance of the settlement of population; and secondly, existing cities replanned or remodeled to meet new requirements. Planning a town or city before settlement is made has great advantages. Many cities intended primarily for governmental, industrial, or residential purposes have been so planned. It is a method, indeed, which merits much wider use. Of this type, Washington

is the most notable illustration. But it is seldom possible to foresee with accuracy the future of a town or city, or to plan for it from the beginning. The complex influences which determine the selection of the sites for towns and cities and the locations of the first streets and buildings must usually be left to work out their results. The opportunity deliberately to lay out new towns and cities is limited and probably always will be. When, however, a small population has been attracted to a town by natural causes and there are indications that because of situation, climate, the trend of trade and commerce, or other forces, an important city is to be established, then, if action is taken soon enough, it is entirely practicable to replan the town so as to provide satisfactorily for its future. There are scores of cities in this country with a population today of 25,000 that will have 50,000 in a generation or less. We can realize this fact more vividly if we look back fifty or sixty years. The average increase for all cities in the United States during the decade from 1900 to 1910 was 31.8 per cent. The gravest neglect is the failure to replan and replan to meet increased demands, to readjust and readjust, to use art and skill and foresight to remodel existing conditions and also to mold and fit for use the new outlying territory about to be occupied. The men who laid out the first streets in London or Boston, for example, provided for the needs of their time with considerable common sense. They could scarcely have been expected to foresee the requirements of a large city. But their successors, who, many generations afterwards, vetoed Sir Christopher Wren's plan for the improvement of London, and still later the suggestions for the betterment of Boston's city plan after the fire of 1872 — those men displayed a lack of good sense and judgment in providing for their own time and an even greater lack of foresight and public spirit with regard to

the future. Many other examples might be given to illustrate this same point.

The emphasis, it would seem, needs to be placed less on the original plan, notwithstanding its importance, and more on replanning. The beautiful cities of Europe, those which are being held up constantly as illustrations of what modern cities should be, are, with but few exceptions, the result of picturesque, almost accidental growth, regulated, it is true, by a widespread respect for art; but improved and again improved, replanned and again replanned. It is here that we fall short. Throughout the United States there are cities with comparatively easy opportunities to improve their water frontages, to group their public buildings, to widen their main streets, to provide in twentieth century fashion for transportation, and to set aside the areas necessary for recreation. Yet, until recently, the people of most of these cities have stood listless, without the business sense, skill, or courage to begin a work that must sooner or later be done.

SPECIFIC NEEDS OF THE SMALLER CITIES

Comprehensive planning, especially with our present limited city charters and the hampering laws of our states, can have only narrowly limited influence in larger places, relieving only the worst civic conditions, ameliorating merely the most acute forms of congestion, correcting but the gravest mistakes of the past. Wide, many-sided, imaginative planning, so far as very large American cities are concerned, must be confined for the present mainly to the extension of those cities and to the betterment of what are really separate communities on the outskirts. But with smaller cities — cities with a population ranging from 2,500 to 100,000 — the case is different. Comprehensive planning or replanning may be to them of far-reaching and per-

manent service. There is scarcely anything in the smaller places that may not be changed. In these smaller cities, for example, railroad approaches may be set right; grade crossings eliminated; waterfronts redeemed for commerce or recreation, or both; open spaces acquired even in partly built-up sections; a satisfactory street plan can be carried out and adequate main thoroughfares established; public buildings can be grouped in an orderly way; and a park system composed of well-distributed and well-balanced public grounds can be definitely outlined for gradual and systematic development. All of these elements of a city plan, indispensable sooner or later to a progressive community, may be had in the small city with relative ease and at slight cost.

MISCONCEPTIONS ABOUT CITY PLANNING

There are a number of misconceptions about the planning and replanning of cities. The first is that city planning is concerned mainly with beauty. The term which carries and gives expression to this misconception is "the city beautiful." It is of the utmost importance that this fundamental error should be corrected. Any city planning that is worthy of the name is concerned primarily with use and only incidentally with beauty. But if there is a reasonably high standard in providing the useful improvements of a town or city, it will be found that utility and beauty are virtually inseparable.

Another misconception, although not so widespread, is nevertheless important. It is that professional planning would tend to make all cities and towns alike. This is also far from the truth. Skilful planning should emphasize individuality for a city just as true education does for a child. It should unfold and perfect its natural characteristics. It should take account of a city's topography, pre-

serve its natural features, echo its business purposes, express its wealth, give form to its traditions, ideals and aspirations. A city plan worthy of the name would tend to check haphazard drift which is apt to make a city commonplace. It would hold up a worthy and distinctive ideal toward which all improvements, no matter how small or unimportant themselves, would ultimately contribute.

HOW TO REPLAN A CITY

The first step in the replanning of towns and cities is a careful study of the underlying conditions — physical, business, and social conditions — a study that is often termed “a city survey.” Whether a survey of such conditions or indeed the preparation of the plan itself, should be undertaken by private or public authority, cannot be answered dogmatically. Local circumstances may usually be left to determine this question. Such work is undoubtedly public work, and yet the appreciation of its need and value is apt to arise at first in a comparatively small group of persons, often a group not entrusted with public power. Reports and plans are often made for voluntary organizations of public-spirited citizens who believe that in this way they can contribute to the public welfare. The movement for city planning is thus following the precedent of other movements, for with but few exceptions advances in the United States have first been undertaken by private individuals or organizations, and first paid for by private funds.

The landscape architect or city planner is apt to begin his work for a city with a request for a topographical map. He finds, almost invariably, that there is no such map. If a park is to be laid out, a private place, or oftentimes even a garden, a topographical map, giving exact information as to the form and shape of the ground and

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AT AVONDALE, NEAR BIRMINGHAM, ALABAMA

Two-room box houses for cotton mill workers, forming a depressing neighborhood occupied mainly by "poor whites"

other physical data, is, in most cases, considered indispensable. Yet, for a city, with conditions far more complex, a topographical map is seldom to be had. There are probably not a dozen cities in the United States that have topographical surveys of any real value as a basis for a comprehensive city plan. It is true that the topographical maps of the United States government, prepared by the Geological Survey, can be had for cities in many sections of the country, but the scale is so small (usually one or two miles to an inch) and the contour interval so wide (usually 20 feet or more) that they are of little worth to the city planner. One of the initial requirements in the replanning of cities, then, is the preparation of topographical maps giving full information as to the present physical conditions. On such a map there would be placed also all other important data controlling or affecting the city plan.

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HOUSING FOR STEEL WORKERS AT FAIRFIELD, ALABAMA
Five-room bungalows for skilled workers renting for \$19.50 to \$25.00 a month. Compare with the shacks of Avondale

BUSINESS AND SOCIAL CONDITIONS

Physical facts, however, are not the only important ones. Business and social conditions, past, present and future, also affect the city plan. One of the first questions to ask is: Upon what does the particular city under consideration depend for its existence? Is it primarily industrial, commercial, educational, residential, or governmental? Or, in what proportion is one or another of these phases dominant? The answers to these and similar questions affect every physical feature of the city plan, determining street widths, transportation facilities, the use of water frontages, the character of housing, and so on. Then in the study of business and social conditions, the attempt should be made to forecast future requirements, and so far as possible, to provide for them. These conditions must be looked at attentively. Facts and figures must be gathered patiently, their significance must be understood and interpreted, and their tendencies

noted. The present should be compared with the past, and the view of the future, while conservative, should be broad and enlightened.

Economic conditions should likewise be included in the local survey, for example, the wealth of the city as shown by its assessed valuation and by a list of city-owned property, including public utilities. Then the survey should present the city's bonded indebtedness, both gross and net; its tax rate and other sources of income. Above all there should be a searching analysis of the annual budget.

CONTROLLING PURPOSES OF A CITY PLAN

When as full a knowledge as possible has been obtained of the physical, business, social and economic conditions of a city, what is the next step in the replanning of old areas or the laying out of the new ones? Is it not to determine the purposes that should control the work, and, having found them, to keep them steadily in mind? Of course, these purposes would vary from city to city; in fact, they sometimes vary in the same city from period to period. I shall name only two of the broader aims which should control city planning, but under these are included many, if not most, of the more specific purposes which properly inspire and regulate civic action.

The first of these purposes is the preservation — restoration, if need be — and the further development of the individuality of the city. Its history, its physical situation, the character of its population, the direction of its industry or commerce, all of these should be appropriately reflected in the city plan. Mr. James Bryce has pointed out, in his *American Commonwealth*, that the one most serious drawback to American life is its uniformity and that this criticism applies especially to our cities. With but five or six exceptions, he says, American cities differ from one another

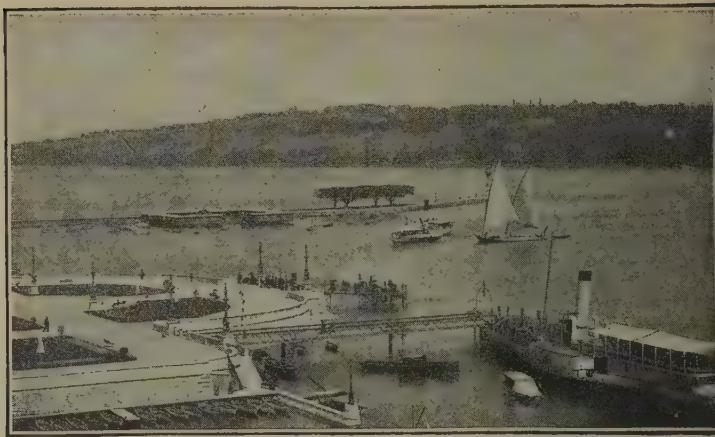
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BEAVER BROOK, WORCESTER, MASS., SHOWING
IMPROVED CHANNEL

only that some are built more with brick than with wood and others more with wood than with brick. A French observer supports Mr. Bryce when he writes that, "These business men, who are occupied with constructing a whole Western civilization out of entirely foreign elements, naturally make it in the image of the American character. Through them the national consciousness projects itself in towns and enterprises so entirely alike that travelers complain of it. They are all agreed in reproaching this country for its cruel monotony. Some humorist or other has compared American things to hot-house strawberries, big as apricots, red as roses, and with no taste. If there is any truth in this epigram, it is the fault of the business

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GENEVA, SWITZERLAND, SHOWING BOATHOUSES,
BREAKWATER, PIERS AND PROMENADES

men. Applying to all products everywhere the same method of indefinite increase, multiplying the workman by the machine, continually substituting hasty wholesale work for the individual and delicate task, they have, in fact, banished the picturesque from their republic. All these great cities, these great buildings, these great bridges, these great hotels, are alike."

Such criticism becomes more pointed if we recall the older cities and towns of Europe and contrast them with our own. What is the explanation of this absence of individuality? In some localities it is the lack of an historic past and of mellow memorials and buildings. Most of it, however, is due to oversight, or to indifference to opportunities easily within our control. It is our failure, for example, more clearly to echo topography in our city plans. The rectangular street systems, the colorless street names, which are repeated from one end of the country to the other, regardless of natural features or local history, are

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Illustrations of our neglect of easy and inexpensive opportunities to give individuality to our cities. There is likewise failure of the people to express themselves and their ideals. As our interest in human life is in the distinctly personal, so is our interest in towns and cities. We should have a local concept. We should cherish a love and pride in local conditions and local achievements. Civic art furnishes the most available and most adequate means of expressing these local customs and aspirations. In a word, we should frame a concept, an ideal of what we wish the city to be, and then we should make it one of the controlling purposes in the development of the city plan.

THE COMMON WELFARE

Another broad purpose that should control all city planning is a more sensitive regard for the common welfare. We need to make many improvements for the benefit and enjoyment of everybody, for the common good. Strong, selfish, almost unchecked individualism still has its sway in our cities, and many of the evils which better city planning may help to correct are due to this cause. For example, the faults of the street system, the ignorant and ugly condition of waterfronts, the failure to link various agencies for transportation, the unsanitary and demoralizing influences of slums — these represent the neglect of any large planning authority to control and check rank individualism and to exercise collective power in the name of the entire community. In this respect how striking is the contrast between American and European cities. About fifty years ago, Europe began the improvement, replanning, and reconstruction of her cities to meet the requirements of modern life. Each city acting with strong, well-regulated collective power, endeavored to provide facilities for wholesome physical exercise, for transportation, for good homes,

for convenient opportunity to enjoy the beauty and wonder of the nature world, and for a more intimate knowledge of noble examples of human life and beautiful products of human work. As a result of this sort of planning, fine city streets, orderly railroad approaches, beautiful public buildings, open green squares and plazas, refreshing water-fronts, ennobling statuary, convenient playgrounds, numerous parks, parkways and boulevards, art museums, theaters, opera houses, and concert halls — all these things in Europe are free, or so nearly free that they are easily available for all the people. To furnish advantages such as these should be one of the controlling purposes of city planning, for they not only provide wholesome recreation as a relief from the grind and fatigue of the day's work, but they also make a definite and, in the long run, an indispensable contribution toward tomorrow's efficiency.

In the last few years a great change is to be noted in all parts of the United States. The field of collectivism is being steadily extended and its power increased. Dr. Charles W. Eliot in a volume entitled *The Conflict between Individualism and Collectivism*, describes this change in the following words: "The rise and growing power of collectivism in the American democracy is due to the same influences which have acted on the European nations, and especially on the English. These influences have been the development of the factory system, the creation of corporations with limited liability, the rise of numerous scientific and artistic professions, the exploitation of the natural resources of new countries or regions by capitalists coming from older countries or regions, and the creation of unprecedented inequalities as to comfort and wealth, not as privileges of birth, but as results, first, of the general liberty and the prevailing social mobility, and secondly, of the transmission of education and property. From all these

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influences taken together there have appeared in every democratic society in the world, and especially in the American democracy, industrial and social classes or layers and strong collective action in every class. . . .

"We have now demonstrated the rapid development of collectivism at the expense of individualism in three great departments of personal and social activity — industries, education, and government. The development has been constructive, not destructive, inevitable in consequence of other profound social and industrial changes, beneficial in the present, and hopeful for the future. It tends neither to anarchy nor to despotism. Its theory is accurately stated in such accepted sayings as these: 'Thou shalt love thy neighbor as thyself'; 'As ye would that men should do to you do ye also to them likewise'; 'Nothing human is foreign to me'; 'We do hold ourselves straightly tied to all care of each other's good, and of the whole by every one, and so mutually'; 'Each for all, and all for each.' Its object is that stated in the preamble of the Federal Constitution — 'To promote the general welfare, and secure the blessings of liberty to ourselves and our posterity.' "

HOW TO GET A CITY PLAN INTO ACTION

Granting that means, private or public, can be found to undertake the drafting of a town or city plan, based upon a survey of local conditions, and to keep planning ahead; granting that such plans can be prepared with proper and well-defined controlling purposes, coördinating one part with another, how is the plan to be put in action? Have American cities generally the powers necessary for this rather new and different kind of city making?

The charters under which the cities of the United States operate vary greatly, and in general they convey but limited powers as compared with cities of Europe. Most cities, how-



SITE OF GARY, INDIANA, AS IT APPEARED IN 1906



MAIN STREET, GARY, INDIANA, IN 1909

The United States Steel Corporation decided to locate one of its important plants at Gary. The result in the rapid growth of the town is illustrated by a comparison of these two views

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ver, have large powers in the field of city planning which they do not now exercise. The first change should be to employ to better advantage the existing law. If they would, the City Councils of many cities have authority to transform their towns and cities by administrative action alone. In many cities, for example, the city government has ample power to inaugurate a much better system of laying out and constructing streets and thoroughfares and of meeting the cost of such improvements. Where the city charters are inadequate, the aid of the State Legislature must be invoked. Such legislation has already been sought in a number of states, California, Ohio, Pennsylvania, Massachusetts, and Connecticut, for example, and easily secured. If the best results are to be obtained, American cities must have a larger measure of home rule and a degree of authority approaching that granted to English towns and cities by the Housing and Town Planning Act of 1909.

DOES CITY PLANNING PAY?

Given a city plan with the necessary administrative machinery to revise and keep it up to date, and the power to execute it, we must meet still another and in some respects the greatest problem of city planning—the cost. As a rule, the first question asked by city officials and business men, when more comprehensive city planning is proposed, is, Does it pay? Three points may be given in answer to that question.

In the first place, certain things are indispensable for every city — suitable streets, thoroughfares, public buildings, homes, and an adequate number of playgrounds, parks, and open spaces. All these must be had sooner or later. It is not a question of getting them or of not getting them. It is merely a question of when. Short-sighted citizens often deceive themselves with the idea that they are saving money

and avoiding expense by postponing expenditures for these city necessities, for necessities they are. Observation and experience in such matters prove that this is a mistaken view. By such postponement they are merely increasing public expenses, increasing the kind of burden from which the majority of American cities are suffering today. Simply because the value of land in growing cities steadily increases in price, because street widening and the clearing of properties for playgrounds and open spaces involve the destruction of more and more improvements as the years go on, and because the constant rebuilding of public edifices costs more than an adequate building properly and permanently located at first would have cost—simply because of such facts as these is postponement a costly practice. Specific illustrations could be given from a dozen cities to enforce each one of these statements.

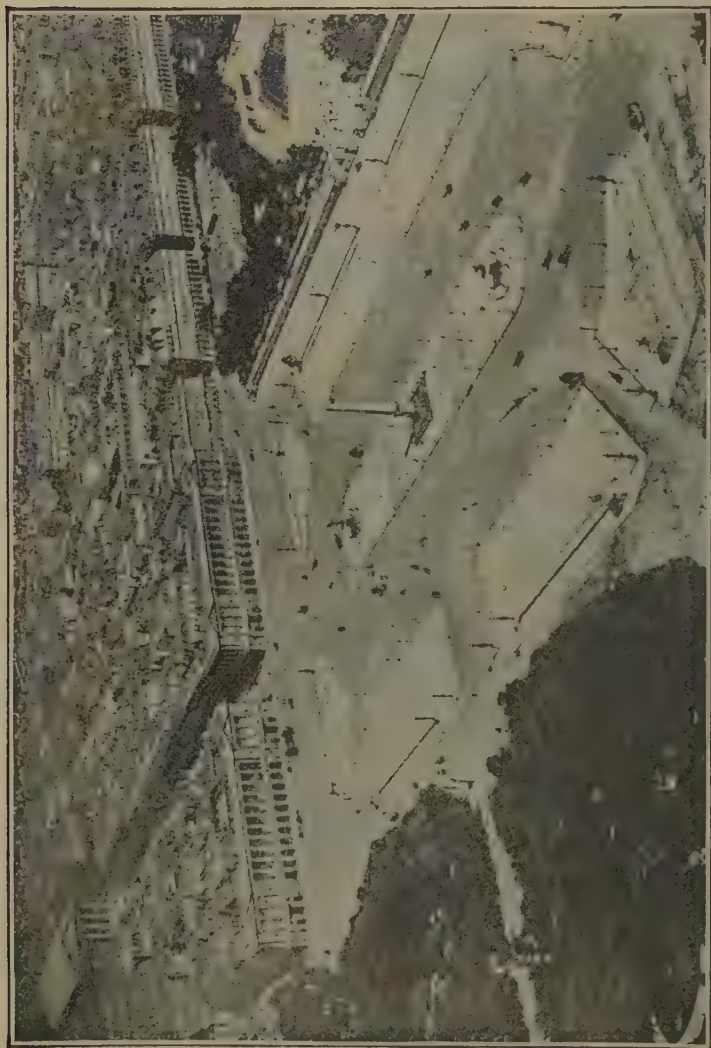
Secondly, it should be kept in mind that cities must choose usually between one form of expenditure or another. The people of a city may prefer to pay the direct and indirect cost of epidemics like typhoid fever, pneumonia and Spanish influenza rather than increase the outlay for pure water, better housing, sewers, and other forms of sanitation. They may elect to pay the bills resulting from an inadequate street system for traffic and the convenient circulation of men and goods, rather than make the loans and annual appropriations required by the adoption of a more up-to-date method of locating and improving streets and highways. But does it pay? These same unreflecting individuals may prefer to lay out the money that they must lay out for ignorant, inefficient, diseased and deformed children, for hospitals, asylums, and reformatories, rather than meet the smaller expense of adequate schools, school grounds and playgrounds. It costs only \$800 to educate a normal boy in the Boston schools for twelve years, or less than \$70 a year. On the

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other hand, it costs \$400 to take care of a bad boy in a Massachusetts reformatory for one year. Which is cheaper, to say nothing of better? Massachusetts spends on criminals 10 per cent of all her taxes. Is it not time that we had the same kind of sanity in public expenditures that we have in private expenditures? It ought to be plain to a thrifty citizen and taxpayer that city planning, as now understood, proposes not only a better method but also, in the end, a cheaper method.

In the third place, let it be frankly confessed how narrow and sordid this line of reasoning is. Cities pay heavily for a mean and unbusinesslike policy in many ways that cannot be exactly described or put into dollars and cents, but which business men and city officials understand very well. The essential question is not one of cost, the attempt to balance the expense of better planning against increased revenues resulting from it. At bottom the question is whether real values in public welfare are to be had from this sort of city planning, and whether the community can provide the ways and means necessary to purchase these values. The central and all-important problem of the cities is the budget: how to spend honestly, liberally, efficiently, and promptly for the protection of life, health, and property, and for the advancement of civilization, and how to levy for these expenditures upon the advantage fund created by the community life in such a manner that taxation shall not breed fresh inequality, injustice, and civic disloyalty.

It may be added that whether we care about health, or wholesome and refreshing recreation, or beauty in civic life; or whether we care only for the increase of industrial wealth and commercial prosperity, we must, sooner or later, turn for aid to this subject of comprehensive coördinated city planning. While not a panacea, it offers one safe and sure way out of many of our municipal difficulties.



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PLACE DE LA CONCORDE, PARIS

A splendid illustration of the advantages of grouping public buildings around open spaces

PART II

Town *and* City Planning

THE general principles which should govern the preparation of a city plan may be stated as follows:

(1) economy and the saving of waste in an endeavor to secure the desired results at a minimum of expense; (2) reasonable regard for the interests of the property owner, the taxpayer, and the general public; (3) anticipation within proper limits of the requirements of the future and provision for them.

Chapter I

Definition and Scope

City Planning has been well defined as the intelligent control and guidance of the physical conformation, growth and alteration of cities, towns, or parts thereof, considered in their entirety. Or, more briefly, the organization of the physical city, town or district to fit it to its complex use. It includes the planning of cities, towns, suburbs, villages, and even rural districts. The material included in this handbook is treated primarily with relation to the city plan and its elements. In general it follows the definition as given above, and the order of the classification published by Harvard University, which has provided an admirable, comprehensive analysis of the subject. This classification itself is an impressive record of the magnitude of the field of city planning.

The approach to city planning is now, and probably always will be, from many points of view. No matter how the directions of approach and hence the points of view may differ, the organization of the modern city for economy, health, efficiency and beauty will remain essentially the same. Therefore a comprehensive classification such as that set forth by

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Harvard University will be useful alike to the municipal official, the business administrator, the engineer, the expert in sanitation, the architect, the landscape architect, and the city planner.

It is not possible in a relatively brief handbook to give anything pretending to be a complete presentation of city planning. The attempt is here made, however, to give a comprehensive presentation of the main ideas and to retain a proper scale and emphasis in the treatment of the subject by a careful apportionment of the space allotted to each part of the subject.

The principal topics included are the following: the city planning movement; the local survey as a basis for city planning; the essential elements of city plans, including streets and roads, street railways, steam railroads, commercial waterways and waterfronts, the subdivision of the land and real estate development, the division of a city into zones or districts, parks, playgrounds, and other public open spaces, public and semi-public structures and city planning aspects of housing; types of city plans; legislation and organization; the financing of city planning projects; professional training for city planning work; new towns and new standards, and the promise of the future.

Throughout the handbook there will be brief references to books and other publications dealing with special topics.

Chapter 2

The City Planning Movement

The modern movement for city planning in the United States may be said to have begun about 1890, with a special stimulus along certain lines in 1893 through the influence of the World's Fair at Chicago. A large amount of city planning, much of it of a high order, was done earlier. In no sense, however, did it represent a movement—it was not widespread, and it was not continuous or persistent.

Notable examples of earlier city planning are: William Penn's plan for Philadelphia in 1682, and the plans for other Pennsylvania cities, like Reading, for instance, which were connected with it; the plan of Williamsburg, Va., in 1699; Oglethorpe's plan for Savannah, in 1733; the great plan of L'Enfant for Washington, D. C., in 1790; other plans due to the influence of L'Enfant or his associates, as Buffalo, N. Y., and Erie, Pa.; the plan for New York City in 1807. All of these plans were of a spasmodic character, of the "once for all" type, without any adequate provision for systematic revision and extension.

The period from the early part of the nineteenth century until the last decade of that century was one in which the planning of cities, like the architectural planning of buildings, and, in fact, like municipal government itself, was at a low point, characterized by few results of a desirable type. It was during this period largely that the western cities adopted checkerboard plans of the most commonplace form, without any real recognition of the requirements of streets and transportation, nor the necessity to preserve natural

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HOSPITAL, U. S. STEEL CORPORATION, GARY, INDIANA

features, nor to set aside public open spaces, nor to take care of the economic and industrial problems involved in the improvement of waterways and water fronts.

The more direct sources of the present city planning movement have been many. Among the most important which should be mentioned are the following: the influence of the plan of 1871 for New York City, which showed not only highways, but a system of rapid transit railroads free from grade crossings with the streets; the appointment of the Boston Board of Surveys in 1891; the Boston Metropolitan Park Commission in 1892; the World's Fair Exposition at Chicago in 1893; the establishment of the school of landscape architecture of Harvard University in 1900; the work of Daniel H. Burnham, Charles F. McKim, Augustus Saint Gaudens, and Frederick Law Olmsted, Jr., in the report of the Senate Committee on the District of Columbia, in 1902; the plan of Chicago prepared under the direction of the Com-

mercial Club, 1906-8, by Burnham and Bennett; and the creation of a Committee on a City Plan by the Board of Estimate and Apportionment of New York City in 1914, with the problem of districting the city as an important feature; and the making of a large number of general plans and reports for the smaller cities.

The background of these definite projects was the rapid growth of cities, a nation-wide civic awakening, the improvement of the form and character of city government, the establishment of public service commissions, the organization of local improvement societies, civic bodies, women's clubs, chambers of commerce and boards of trade.

A great influence was also exercised by the rapid and substantial progress of town planning in Europe. Soon after the Franco-Prussian war, the German cities, beginning with those in Prussia, went to work systematically to improve their municipalities. Much planning was done, and publications of value were issued. Other European countries, especially France and Belgium and Austria, achieved success in the replanning of towns and cities for modern life. Especial mention should be made of the passage of the English Housing and Town Planning Act in 1909, which provided a suggestive method of procedure for Canada and the United States.

A clearing-house for city planning ideas and an effective means of stimulating and directing the movement was secured by the organization of the National Conference on City Planning in 1909, which has continued its work to date, holding an annual conference, publishing its proceedings and a quarterly entitled "The City Plan" and carrying on correspondence.

The ideas of most significance in the modern city planning movement are: the increasing dependence of the individual upon the prosperity of the city as a whole; the

NEW IDEALS IN THE PLANNING OF

importance of planning, not merely for the routine requirements, but also for those of the future; and the necessity, for reasons of economy as well as success, to coördinate the planning of the various features so that the improvements to be carried out will be well related, one to another, far-seeing and permanent.

The city planning movement in the United States, and in the various cities which take it up, has usually three phases. There is first the propaganda, which expresses itself mainly in rather vague discussion. That is followed often by the preparation of a report and a general plan submitting more or less definite proposals based upon a preliminary study, and resulting as a rule only in tentative suggestions. Frequently as a direct result of this general planning, however, detailed plans and construction drawings for definite improvements follow. This third stage is apt to be somewhat ineffective, unless suitable local machinery is secured in the form of a planning board or city plan commission with some real power, and an appropriation with which to do its work.

An excellent outline of "How to Organize a City Planning Campaign," by Frederick Law Olmsted, has been published in *The American City* pamphlets. It gives the basic idea of city planning, the city plan office of the future, a city survey as the basis for a plan, and physical accomplishment as the final step. *The American City* has also published a list of American city planning reports printed from 1900 to 1914 inclusive. A valuable report on what has been accomplished has been published by the American Institute of Architects, under the title of "City Planning Progress."

Chapter 3

Local Data as Basis for City Plan

The local survey, or the civic survey, as it is usually termed when prepared for use in connection with the city plan, may be defined as the collection, compilation, interpretation and presentation of all the facts and information bearing upon the city's physical, social, economic, and financial condition.

The civic survey is one of the four main divisions of successive stages of city building, or city development. These main divisions may be set down as follows:

1. A survey of existing conditions and tendencies.
2. General plans and recommendations.
3. Detail and construction plans.
4. Maintenance and administration.

The degree to which the local survey should be carried depends largely upon the degree to which it is likely to be used. It is not an end in itself. As indicated above, it is made to serve certain purposes. At the present time there is great difference of opinion as to the extent and elaborateness of the local survey. For example, the Massachusetts Homestead Commission has drawn up a form for the local survey comprising items covering sixteen printed pages. As a contrast, Mr. Thomas Adams has reduced the survey to three items as follows, which he terms the absolute minimum: (1) topographical map, showing contours at intervals of 5 feet to 25 feet, existing streets, buildings and physical features, etc.; (2) maps of sewers, water and gas mains; (3) map showing traffic conditions and growth of population,

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RESERVOIR AND MASONRY WATER TOWER, FORBES HILL,
QUINCY, MASS.

and indicating generally the location of factories, parks, etc.

An outline of intermediate length suitable for smaller cities (say 100,000 population or less) is as follows:

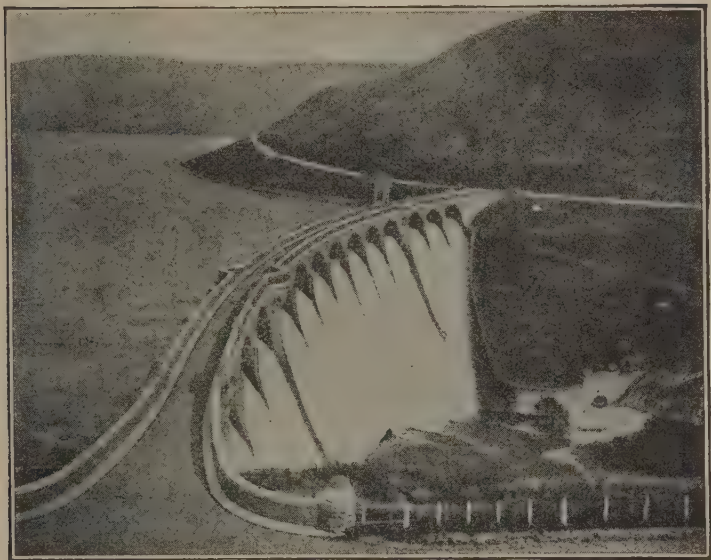
I. PHYSICAL CONDITIONS.

A. Topography.

1. All available surveys of city.
2. Government surveys of district.
3. Surveys of adjacent towns.
4. Detail surveys by city or government.

B. Resources and Climate.

1. Range of temperature.
2. Rainfall.
3. Direction of winds.
4. Natural resources.
5. Plan showing open land available for various purposes.



THE CRAIG GÔCH DAM, ELAN RIVER, WALES
New works for the water supply of Birmingham, England.
Note the inviting roads, built chiefly for the
pleasure of the public

C. Areas and Zones.

1. Present occupation of land.
2. Wooded areas.
3. City-owned land.
4. Field map with notes on existing conditions and opportunities.

II. SOCIAL CONDITIONS.

A. Housing.

1. Typical lot and block plans.
2. Typical house plans.

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3. Examples of good, bad and average housing.
4. Over-built-upon land.

B. Occupation.

1. Business distribution.
2. Factory distribution.

C. Health.

1. Vital statistics.
2. Density of population.

D. Education.

1. School distribution.
2. Density of school population.
3. School statistics.

E. Recreation.

1. Park and playground map.
2. Park and playground statistics.
3. Other open spaces.

F. Welfare.

1. Special schools.
2. Social centers.
3. Charities and correction.

G. Safety.

1. Fire hazard.
2. Grade crossings.
3. Charities and correction.

III. ECONOMIC CONDITIONS.

A. Streets.

1. Accepted and proposed streets.
2. Actually laid out.
3. Street widths.
4. Street sections.
5. Street grades.

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B. Transportation.

1. Railroad map — steam and electric.
2. Water transportation.
3. Measurement of cars, vehicles, vessels, etc.
4. Traffic census (selected points).

C. Public Utilities.

1. Water supply.
2. Disposal of waste.
3. Slaughter houses.
4. Other utilities — lighting, telephone, etc.

D. Food Supply.

1. Wholesale and retail districts or centers.
2. Distribution.

E. Real Estate.

1. Land values (assessed and actual).
2. Building values.
3. Building heights.
4. Building growth.
5. General tendency.

F. Nuisances.

1. Smoke.
2. Noise.
3. Dust.
4. Billboards.
5. Overhead wires.

G. Administration.

1. Diagram showing responsibility of various officials.

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IV. FINANCIAL AND LEGAL CONDITIONS.

A. Financial.

1. Budget items.
2. Costs per capita.
3. Comparison with other cities.
4. Methods and rates of taxation.

B. Legal.

1. Building laws.
2. City planning laws.
3. Building lines.
4. Regulations and restrictions.
5. Unused powers.
6. City planning board.

PREPARING A CIVIC SURVEY

In the preparation of a civic survey there are four more or less distinct steps, as follows:

1. The drafting of a questionnaire.
2. The collection of data, maps, surveys, etc.
3. The interpretation of the data, maps, surveys, etc.
4. The presentation of the results, preferably in graphic form.

(1) The determination of the length and elaborateness of the survey rests largely with the questionnaire. A good illustration of a very thorough questionnaire is given in the "Report of Suggested Plan of Procedure for Jersey City," by George B. Ford and E. P. Goodrich. Another illustration, less lengthy, is that of "City Planning for Pittsburgh, Outline and Procedure," by Bion J. Arnold, John R. Freeman, and Frederick Law Olmsted.

(2) The collection of data is illustrated in the "Preliminary City Planning Report of Bridgeport, Conn.," by John Nolen. The traffic count in connection with the proposed

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Stratford Avenue Bridge, described in detail, shows what a valuable basis the local survey may furnish for a costly city planning project. Another and somewhat different illustration from the same report is the study of the stages of development of the Reilley Street Block. The survey here consists partly of definite facts with regard to the changes in assessed valuation, the number of people on a given lot, rents, income, etc., and partly of local opinion gathered from various sources as to the reasons for changes of occupancy, the succession of nationalities, the number of buildings constructed, etc.

(3) One of the most important parts of the local survey is the interpretation of the data. There is often a temptation to read our own conclusions into the facts, instead of interpreting the facts impartially. Interesting illustrations of the interpretation of local data and surveys can be had from the range of land values maps prepared for Cambridge, Mass., and for Bridgeport. Some of the conclusions were as follows: that land values in general over the entire city have become high along relatively wide, through streets; that values are high in areas adjacent to public parks, where surroundings are assured; that protected and restricted residential sections usually have higher values than the districts surrounding them; that the overcrowding of residential sections sometimes results in higher and sometimes in lower land values.

(4) The presentation of the results of the local survey should be accurate, clear and interesting. In making them interesting, the chief factor is the use of graphic means. This method is being increasingly employed with unusually good results. Statistics and data are much increased in usefulness if shown graphically on maps and diagrams. Graphics convey information directly to the mind. They facilitate the comprehension of relationships. We may thus portray by

simple methods whole masses of data, and so illuminate the material of the civic survey. Where graphic means are not employed, the statistical tables, no matter how complete or valuable, are apt to receive little attention.

A somewhat specialized form of local survey, but closely connected with city planning, is the industrial survey. With the increase in the activities of chambers of commerce and boards of trade there comes a demand from the business men for reliable information with regard to what may be done in the way of bettering industrial and living conditions.

The advantages of an industrial survey are the following: (1) It gives accurate information with regard to the city's industries; (2) the reasons for and against certain industries in a given city; (3) the education of the people of the community with regard to their own industries; (4) the existing industries which are most susceptible to expansion.

One of the chief functions of city planning is to estimate and provide for the future of cities. In the attempt to do this with reasonable success, the local survey contributes the most valuable basis. It gives the increase of population, the growth of building operations, the distribution of building permits, the range of land values, the various successive stages of development of lots and blocks, the volume and increase of traffic at selected points, the comparison of methods and costs of one city with another, etc. These are the facts which a trained and experienced planner can use to discover the operating causes and the probable future conditions of a given city. With these as a basis, it is possible to outline a policy and a program of development and construction that ought to prove a valuable guide for a period of at least twenty or twenty-five years.

Among the best publications dealing with the local survey may be mentioned: "The City Survey Preparatory to Town Planning," by the Sociological Society, London, England;

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"The Civic Survey of Edinburgh" and "City Surveys for Town Planning and the Greater Cities," by Professor Patrick Geddes; "Knowing One's Own Community," by Carol Aronovici; "The Survey for a City Plan," by James S. Pray; "The Social Survey" and "A Bibliography," by the Department of Surveys and Exhibits, Russell Sage Foundation; "The Survey of Public and Social Recreation in Kansas City, Mo.," "The Civic Survey and City Plan of Akron, Ohio," by John Nolen, and a chapter in *City Planning* on "Fundamental Data as a Basis for City Planning," by George B. Ford, in the series published by the National Municipal League.

Chapter 4

Types of City Plans

The classification of cities according to the type or character of the city plan may be considered under three heads: (1) types distinguished by the style of the plan; (2) types distinguished by dominant function; (3) types distinguished by size.

Most cities can trace their origin to military, trading, or commercial requirements. In the foundation of Greek cities, for example, four distinct periods have been noted. In the first of these the city was planned as a place of refuge against hostile attack. In the second, its chief use was in the development of trade. In the third, artistic embellishment was the leading feature. And the fourth period embraces the time of the decline.

Cities generally owe their existence to geography, and such individuality as they have is due largely to topography. The chief topographical characteristics determining cities are the sea, rivers, hills and plains. It has taken decades of urban development and of mistakes to impress upon the cities of the United States the necessity of respecting and conserving these natural features, to which they owe not only their form, but often their very life.

Cities that have been laid out upon preconceived plans may be broadly divided into two classes: the first is the radial system, or what is often called the spider's web plan; the second, the rectangular or gridiron plan.

The radial type has been most common in Europe. The rectangular or checkerboard type has been used widely in the

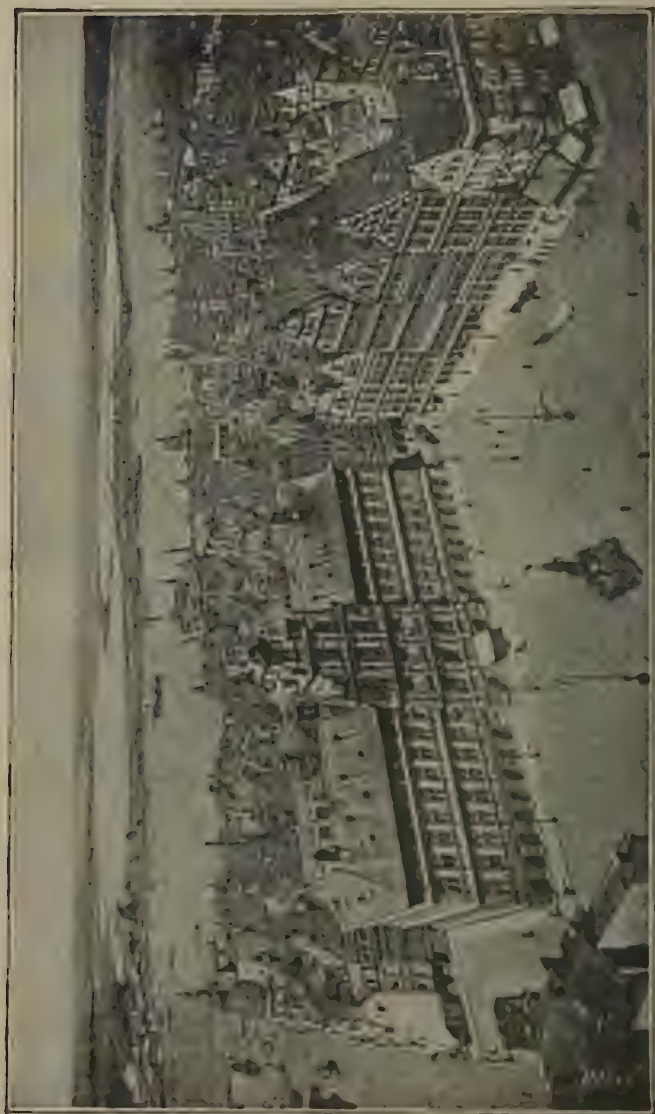
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United States and in new colonies generally. It would not be difficult to show that from the point of view of traffic facilities, as well as city attractiveness, the radial system has proved the better one in use. An interesting criticism of the limitations of the rectangular plan adopted for New York City by the Commission of 1807 has been given by F. L. Olmsted, Sr., in which he says, "Some two thousand blocks were provided, each theoretically two hundred feet wide, no more, no less; and ever since, if a building site is wanted, whether with a view to a church or a blast furnace, an open house or a toy shop, there is, of intention, no better place in one of these blocks than another. . . . If a proposed cathedral, military depot, great manufacturing enterprise, house of religious seclusion or seat of learning needs a space of ground more than sixty-six yards in extent from north to south, the system forbids that it shall be built in New York. . . . There is no place in New York where a stately building can be looked up to from base to turret, none where it can even be seen full in the face and all at once taken in by the eye; none where it can be viewed in advantageous perspective. . . . Such distinctive advantage of position as Rome gives St. Peter's, London St. Paul's, New York under her system gives to nothing."

A combination of the radial and rectangular systems has many advantages, and is particularly adaptable to the addition of new areas to old cities. The plan of the city of Washington is an interesting study of the combination of the chess-board and the radial systems.

SEEKING NATURAL CONDITIONS

It is not likely, however, that we shall find in any "system" the correct method of dealing with the traffic requirements of cities in the future. If they are to be fulfilled, no purely rectangular or radiating system is likely to be of great use. "Success in town planning," writes Dr. J. Stübben,



GRAND PLACE AND HOTEL DE VILLE, ANTWERP

The dignity, beauty and economy of an orderly arrangement of public buildings

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the eminent German engineer and writer, "is more likely to be attained by seeking out the natural topographical conditions. A full consideration for the levels, roads, and boundaries must be the basis upon which all schemes must rest, and these considerations can only be left out of account if they become antagonistic to the legitimate requirements of traffic and town extension, or for economic or esthetic reasons. The closer a town plan adheres to the natural conditions, the more original and attractive it will be. The filling in of the secondary roads to the main network of thoroughfares should be approximately rectangular, because the rectangle is the most convenient form of building block, and for the actual traffic requirements the diagonal system can always be resorted to. The radial form of arrangement is advisable for important focal points; town gateways, railway stations, the approaches and similar situations. Curved streets adapt themselves as a rule better to hilly ground than straight ones; for wide vistas, distant perspectives, and grand monumental effects the straight line asserts itself. The day has gone by for the unqualified employment of definite systems; henceforth they should not play a ruling but a subsidiary rôle."

The classification of cities according to the types distinguished by dominant functions includes government cities, such as national or state capitals; commercial cities, industrial cities, residential cities, especially those serving as resorts; garden cities; and ideal types, as for example the city proposed by Mr. H. C. Andersen of Rome, Italy, or the city planned in connection with the memorial projected in commemoration of the organization of a League of Nations.

A GARDEN CITY

From the point of view of city planning, one of the most interesting types in this classification is that of the "garden

city," the best example of which is Letchworth, England. The founding of Letchworth was undertaken in the belief that the problem of the housing of the industrial classes, which is agreed to be one of the pressing problems of our modern civilization, could only be attacked successfully by a fundamental change in our methods of urban development. The existing methods of haphazard building, which resulted in a few years in the creation of new slum areas, were not only socially bad, but expensive. The increasing wealth of the country, the growth of population, and the extension of trade, were responsible for this urban development, but it was clear that some new method had to be adopted if the new areas were to be anything but gigantic mistakes and burdens for future generations. The garden city of Letchworth is not a fantastic or impossibly idealistic scheme. It is simply town building according to modern town planning knowledge. Among the most interesting publications on this subject are *Garden Cities*, by Ebenezer Howard, the founder of Letchworth, and a more recent volume entitled *The Garden City — A Study in the Development of a Modern Town*, by C. B. Purdom.

THE SMALLER COMMUNITY

Cities distinguished by size afford examples of types involving planning of our largest cities or groups of cities, as in metropolitan areas, or smaller cities with a population in the neighborhood of 100,000, or towns, and even villages. The planning and replanning of the smaller cities takes on added importance when we consider how great is their number, the population affected, and their relative rates of increase. Of the total population of the United States, according to the census of 1910, more than one-half, or 53.7%, is still rural; only 46.3% is urban. Of this 46% more than one-half, or 25.5% of the total population, is included in towns and

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smaller cities with a population ranging from 2,500 to 125,000, and only 20% in the larger cities with a population of from 125,000 to 1,000,000 or more. Moreover, the relative increase of population is greater in the smaller cities, especially those with from 50,000 to 250,000, being 41% against 32% for cities of 1,000,000 or more. The number of places, of course, grows steadily with the decrease in population. For example, of cities of 1,000,000 there are only three; of from 500,000 to 1,000,000, five; of 250,000 to 500,000, eleven; of 100,000 to 250,000, thirty-one; of 50,000 to 100,000, fifty-nine; of 25,000 to 50,000, one hundred and twenty; and of 2,500 to 25,000, twenty-one hundred and seventy-six. Cities with a population of 100,000 or over number only fifty.

The planning problems of the smaller cities are much like those of the larger cities, except that the smaller cities have a better opportunity to head off many of the evils resulting from the early lack of proper planning on the part of cities that have now grown large.

The planning of the most sparsely settled units is now attracting attention, and has recently been well discussed in a bulletin of the American Civic Association by Professor F. A. Waugh. He points out that country planning must follow. The country has just as great a need and just as good a right to be planned as the city. Something over half the people of the United States still live in the country. Moreover there are sound reasons for thinking that, just at the present time, the general weal of society is more concerned in the salvation of the country than in the next improvements in the city. A study of rural conditions and problems in Canada has recently been prepared by Thomas Adams for the Commission of Conservation under the title of *Rural Planning and Development*.

Chapter 5

Elements of City Plans

The principal elements that make up a city plan are the streets and roads, the street railways, the steam railroads, the waterways and waterfronts, the parks, playgrounds and other public open spaces, and the various public or quasi-public structures. In a comprehensive analysis of the subject from this point of view, there should also be included the subject of land subdivision and the restriction of private property, which embraces in its most complete form building zones or districts and the limiting of the area, bulk and use of buildings.

STREETS AND ROADS

In building a city the first act usually is to lay out some kind of street system, and although a good street system is of primary importance to convenience and economy in a city, its establishment has not usually been presumed to involve any special knowledge or skill beyond that of the surveyor, nor any different point of view from that of the real estate promoter. Most of the city planning in the United States has been undertaken with the proprietary point of view. It has been done for the owners of the land largely with a view to early and profitable sales. Not only that, but the methods, traditions and habits created by these private owners have dominated in measure the official city planning agencies which later became established in cities. These public agencies have often, in fact usually, had insufficient

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power and inadequate funds to accomplish the ends that are necessary in a good street system.

The importance of the street in the city plan rests in the fact that it is the channel of all the ordinary means of public circulation and public service, that it is essential to the profitable development and use of property, that only through the opportunities it offers can there be any broad or attractive expression of municipal life, and that only through a comprehensive, well-ordered system of main streets can the functions of the city be performed with economy and efficiency.

The growth of a city naturally is radial, pushing out in every direction from one or more centers, unless topography or some other practically insurmountable obstacle prevents. This is a law of community growth, yet many of the builders of cities have ignored it, and have permitted cities to extend over immense areas without provision for these natural means of growth. Indeed, it has often happened that the direct routes which grew up naturally while a district was rural or suburban have been abandoned or obstructed in the later development of urban facilities, and have been superseded by a system of streets projected with the sole purpose of developing private property.

City planning means first of all adequate facilities for circulation. The greatest problems are those of main thoroughfares and street railways considered in connection with the framework of steam railroads. Such a system should be planned for every town and city that hopes for a well-ordered and satisfactory growth. Main thoroughfares should be planned in as direct lines as possible, but they need not necessarily be straight. Sharp curves and sudden jogs should be avoided, and changes in certain directions should be accomplished by means of curves rather than angles, except where the deflection occurs at an intersecting street.



PIAZZA DEL PLEBISCITO, NAPLES

The controlling influence of topography upon cities is here well illustrated

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A graceful curve or a well-planned fork will tend to break the monotony of endlessly long, straight streets. In the planning of main thoroughfares, topographical conditions should not be permitted to exercise an undue influence. Detours which would materially lengthen the route should be made only to avoid excessive grades. Heavy cutting and filling is to be preferred to many windings in a great traffic route which may be required to carry the trade of a large city for centuries. The first plan for such a thoroughfare must usually be considered its permanent one, for it is seldom, and then only at great cost, that its capacity can be increased after the abutting property has been built up.

Among the fundamental principles in the planning of main thoroughfares which are generally accepted as sound, are the following:

1. That some central city authority should undertake the planning of all main lines of communication.
2. That arterial streets and roads should be taken seriously as highways for intercommunication, and enough direct routes preserved from being blocked to provide for considerable future increase of road traffic.
3. That we should recognize that streets now carry vehicles of at least three distinct speeds, and that wherever possible, efficiency requires separate lines and tracks for the use of each.
4. That the danger and delay caused by the crossing of main thoroughfares should be reduced, so far as possible, by gathering up the minor roads into secondary streets, and by bringing the latter into main thoroughfares only at fairly long intervals.
5. That where these junctions occur, ample space for the circulation and distribution of traffic should be provided to facilitate passing and crossing and to make it safer.
6. That the location of main thoroughfares should not be

NEW IDEALS IN THE PLANNING OF

considered by itself, but should take account of the planning of business, industrial and residential districts, of areas for recreation, and of connections with surrounding towns and cities.

7. That the organic planning of street systems with a main frame of thoroughfares requires the use of varying street widths. Such a system is more efficient, more economical, and also more stable. It renders less liable undesirable and unnecessary changes.

8. That in new suburban areas, adequate width on the main routes should be reserved wherever additional space is likely to be needed by future growth.

WHAT MAKES A GOOD STREET?

To increase the efficiency of the main thoroughfares, secondary thoroughfares should be established, connecting the main ones with each other and with the secondary centers of population and industry. These two classes of streets should form the primary plan designed to create direct routes at reasonable intervals throughout the entire city and surrounding districts. This should be done without special regard for the development of any particular property, but with the impartial aim of encouraging an equal distribution of opportunities for improvement.

Every decision with regard to the street is important—its location, its width, its subdivision, its grade, its planting, its fixtures. With few exceptions, these decisions concern the general public far more than the individual or groups of individuals who happen to reside or own property on the particular street under consideration.

Different streets have different functions, and every street is related, or should be, to some other street. These varying functions require varying treatment, especially differentiation with regard to street widths. The area given up to streets



WALPOLE, MASS., HIGH SCHOOL

The Walpole High School is liberally surrounded with open land and adjoins a town forest of about a hundred acres, a gift of a public-spirited citizen

in most cities is quite ample; but its distribution has been arbitrary and unsystematic. The practice of maintaining uniformity of widths throughout a street system has been carried too far. Only a few streets become important through the establishment of business upon them, or through the requirements of transportation. There has been much discussion of the merits and demerits of classification and standardization as aids in the establishment of street widths.

The facts which should control street widths are: (1) the width required for a line of vehicles, usually fixed at eight or nine feet, thus determining road units; (2) the width required for a line of pedestrians, thus fixing sidewalk



A WELL-PROPORTIONED STREET

units, usually estimated at two feet; (3) the classification of streets of a city according to the traffic requirements upon them, or the other functions that they are to serve; and (4) an estimate of the present and future traffic of the streets of any given class, the width required to meet that traffic, and then the standardization of that width.

The requirements of local streets are different from those of main thoroughfares or even secondary streets. The local street should not be broad, and to make it so incurs needless expense for grading and paving as well as for land. If the local street is kept narrow, it acquires a quality more distinctly domestic. It is cosier and more attractive. There are many good illustrations of local streets laid out with a total width between properties of forty feet or less, the roadway being not more than from twenty to twenty-four feet.

In providing locations for the main thoroughfares, opportunities should be sought for creating public open spaces and

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appropriate sites for public and semi-public buildings. The selection and planning of such features, or planning with a view to their establishment in the future, should be a part of the study of the primary street plan. The convenience and the effect of public buildings and small open spaces is largely lost without suitable approaches giving advantageous viewpoints.

The constantly increasing variety, size and number of underground structures in cities necessitates wide main thoroughfares for their accommodation, as it does for the accommodation of surface traffic. It is difficult to realize the vast network of pipes and conduits that lie under the streets. Such structures are certain to increase in number as new and large uses are found for them. The most important are the water pipes, sewers, gas pipes, electrical conduits, steam and hot water pipes, pneumatic tubes and refrigerating pipes. Subways, galleries for pipes and conduits, and vaults under sidewalks will require more and more consideration in future city planning.

A GOOD PLAN IS GOOD BUSINESS

Foremost among the functions of practical city planning is to arrange a city so that its citizens can live and do business there with the maximum of comfort and the minimum of cost. No argument is necessary to convince even the most skeptical that a city which offers the most comforts and conveniences from a living and business standpoint, and at the same time at a minimum of cost, is the city that is going to grow rapidly in population and in wealth. As this is so obvious, it seems incredible that cities, both large and small, have not made critical examinations of their street plans with a view to reducing the cost of distributing food and other supplies. A city may be planned to reduce the costs of distribution and therefore the cost of living in the following

NEW IDEALS IN THE PLANNING OF

ways: (1) by a proper location of main depots well related to both rail and water lines; (2) by a convenient and orderly location of streets connecting the main centers of distribution with each other and by providing a serviceable system of secondary streets so that every part of the city may be easily and quickly reached from these main centers; (3) by adequate street widths and a skilful and economical subdivision of any given width into roadway and sidewalks; (4) by a careful study of street grades and the elimination or reduction of unnecessarily heavy ones; (5) by raising the standard of street pavement and the use of more discrimination in the paving of streets so as to fit them for the kind of traffic passing over them; (6) by the separating of the grades of streets for ordinary vehicles from the grades of railroads crossing the same; (7) by the compilation and use in city planning and replanning of accurate data showing the quantity, character and weight of vehicles and the speed and size of the same, together with the various routes used between the different distributing centers; (8) by the better utilization of the country trolley and the city street car lines. In all these ways and in others closely related to them, the planning of towns and cities may be made an effective means in reducing the cost of living.

The literature on streets in connection with city planning is now quite extensive. Special mention should be made of the article of B. A. Haldeman on "The Planning of City Streets," in the Proceedings of the Engineers Club of Philadelphia, 1913; Nelson P. Lewis's paper on "Street Widths and Their Subdivision," Proceedings of the National Conference on City Planning, 1911; the report of Frederick Law Olmsted on "Pittsburgh Main Thoroughfares and the Down Town District," 1911; and the comprehensive volume of Charles Mulford Robinson on "City Planning" with special reference to the planning of streets and lots, 1916.

STREET RAILWAYS

One of the chief agencies in promoting progress in cities and creating wealth throughout the industrial world has been the street railway. It is the facilities for street transportation that have made the modern city possible, and created many of the most difficult city planning problems. The development of transportation in the United States has been due largely to private knowledge and private capital. Public authorities have seldom aided or encouraged the men who conducted the first experiments in city railways. The same spirit of conservatism together with the apparent impossibility of establishing continuing policies has obstructed the vision, limited the energy, and furnished inadequate appropriation for public enterprises of magnitude, outside of the ordinary routine of the city.

It is not surprising that the needs of modern transportation were not provided for in the early planning of cities. It is surprising, however, now that the transportation needs are clear, that means are not taken to provide for them. While every form of transportation is called to the service of the city, those forms which represent the daily flow of traffic through the public highways, and particularly the street railways, come most closely in touch with the masses of the people. The extent to which they serve and satisfy the public need may be taken as one of the indications of the progress and enterprise of the community. But whether the business of the street railway drifts into public ownership and operation, or whether it continues in private control, thoroughly efficient and satisfactory service can be given to all parts of a community only by a well-distributed and well coördinated system which shall provide the most direct and speedy routes. This is true not only between existing important business and residential centers, but to and from

points and through sections which need the aid and encouragement of good transportation facilities for their development into important centers. Such a street railway system can be created only where the system of main thoroughfares which forms the routes which must be used by general traffic is established with a primary view to providing adequate facilities for transportation.

“RAPID TRANSIT”

The first discovery in almost every city where systematic studies have been made for the improvement of transportation has been that the street railway system is poorly planned and will not permit of such a routing of the railway lines as is necessary for thoroughly good service. These conditions are found in their most aggravated forms in the central areas toward which the lines converge. The only really efficient remedy, as a rule, is the widening or opening of streets, but as this involves heavy expense and the destruction of valuable property, it is seldom applied, and various makeshifts are adopted. When the city reaches metropolitan proportions and the congestion becomes intolerable, the elevated railroad or subway is resorted to, which often increases rather than decreases the evils for which a remedy is sought.

From the point of view of city planning, the most important thing to keep in mind is that thoroughly economic and satisfactory transportation facilities cannot be provided in any city until the street planning and street railway authorities work in coöperation in providing the necessary extensions and improvements. Street systems have been extended more or less arbitrarily, without proper consideration of their availability for purposes of general transportation. The failure to do this is often what makes subways necessary. Cities should have a coördinated system of thoroughfares. They should be planned with a view of



HUDSON TERMINAL, NEW YORK CITY

An elaborate metropolitan city subway system of transportation is here well illustrated

providing efficient, economic and abundant street railway service, and so far as possible on the surface of streets.

Rapid transit may be provided by "tube tunnels," subways, "open cuts," viaducts, or elevated railroads. Only cities of great size and population, however, require provision for rapid transit service. Early development is, or ought to be, influenced largely by the city's topography. Provision for transportation necessarily follows the earlier development. The growth of a city is usually irregular in plan, and the later provision of rapid transit consequently becomes more difficult to apply. In the growth of a city the business area and district have probably been of narrow extent with considerable congestion. The provision of rapid transit facilities in the small area of congestion is liable to increase that congestion rather than relieve it. Therefore rapid transit facilities centering upon a business district should be provided not to a single point,



SEA BEACH LINE, BROOKLYN RAPID TRANSIT CO.

The "open cut" costs less than the subway, and passengers travel in greater comfort. The "open cut" also gives comparative quietness of train operation

but to a number of points covering an extended area, so that the lines of travel may tend to increase the area and thus decrease the density of business congestion. Theoretically, the perfect provision for rapid transit in a city would take the business district as a central circle and radiate from that district in every direction, lines having large facilities nearer to the central circle, and tapering out to the lesser facilities in the outlying suburban districts, thus effecting what in diagrammatic form would be a star with many points. To obtain this, a general rectilinear layout for the regular streets with broad diagonal avenues radiating in straight lines from the central district would appear to yield the best results.

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Straight streets for rapid transit facilities are most desirable, although curves having an easy radius are not objectionable in operation, nor do they add materially to the initial cost. In the development of a city plan the entire elimination of any terminals for rapid transit service within the business district should be considered essential. Operating lines should extend in from the outer districts, pass through the business district, and extend out again to the exterior sections of the city. Adequate facilities for transportation are best obtained by the provision of main straight arteries for rapid transit from a central district to the outlying suburbs, and then from the various stations on these radial lines, provision should be made for local and subsidiary distribution by means of surface transportation.

Books and articles of special value in connection with the street railways and the city plan are: the reports of Bion J. Arnold on Pittsburgh, Chicago, and other cities; the writings of John V. Davies; the articles and reports of Delos F. Wilcox; the Proceedings of the National Conference on City Planning, 1913; and the report of the Royal Commission on London Traffic, 1911.

STEAM RAILROADS

The engineer working on city planning problems is nearly always confronted with two extreme alternatives. He may plan for the perfect solution of the problems on paper, practically regardless of existing conditions, or he may accept present conditions in their entirety and simply build on them as a basis. A sound analysis of the whole problem with due regard to the original and acquired rights of all parties, including always the general public, will usually lead to a middle course of compromise. Many good suggestions and features of a city plan fail of acceptance

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because coupled with issues which, though ultimately desirable, are not essential to the immediate betterment.

It should be an accepted fact that the plans for railroad development should, so far as possible, present ultimate conditions. The recommended layout should be such as to insure the maximum benefit to the community at large. It is therefore incumbent upon the engineer to specify the progressive steps necessary to put the plan into action. In this regard the weakness of many plans is apparent. The ultimate layout may be complete, but failure to suggest the successive stages often leaves the plan to be digested as a whole, and its practicability is much more difficult to establish.

The main divisions of the problem of the railroads are: (a) provision for passenger traffic—the means of carrying present and future generations safely, cheaply, conveniently and quickly; and (b) provision for freight—the means of handling with dispatch and economy foodstuffs, manufactured products and raw materials for local delivery, shipment or transshipment.

The importance of study of the railroad problem in connection with general city planning is due partly to the need of plans for effective ultimate consolidation, following independent development and extension by competing interests. The essential needs are, first, to provide a flexible and enduring system which shall represent the best type of public service; and second, to introduce economies of management, operation and maintenance of the properties not usually possible under independent control, thus making for more efficient service and lower rates.

The railroads have been called the framework of the city plan, and their importance has been ably discussed in papers by George R. Wadsworth, formerly Consulting Engineer to the Boston Metropolitan Improvements Commis-

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sion; by Frederic A. Delano, President of the Wabash Railroad Company, and others. It has been made clear in these discussions that it is unfortunate to assign to a commission or to any expert the study and analysis of a single system of transportation, involving only the steam railroad properties, the rapid transit lines, or the surface car lines. The component parts of the problem cannot properly be separated. There is a distinct and proper relation between the functions and physical properties of steam railroads, rapid transit lines either existing or proposed, and the usual electric car lines running on the surface of streets. Whenever possible, the entire problem should be considered and attacked as a unit, and the development of the system as a whole should entail the consideration of all transportation routes.

Among the books of special importance dealing with steam railroads in relation to the city plan may be mentioned: F. A. Delano, "Railway Terminals and Their Relation to City Planning," *Engineering Record*, December, 1909; Edward Hungerford, "The Modern Railroad"; J. A. Droege, "Freight Terminals and Trains," including a revision of yards and terminals, 1912; George R. Wadsworth, Proceedings National Conference on City Planning, 1910.

COMMERCIAL WATERWAYS AND WATERFRONTS

The proper development of water frontages, harbors and docks is essential to practical city planning. The navigable waters of the United States are such as are navigable in fact, and which by themselves, or in connection with other waters, form a continuous channel for commerce with foreign countries or among the states. In England, waters are theoretically navigable if they rise to flow of the tide, the public having the rights of fishing and navigation, but the



CHARLES RIVER BASIN, BOSTON, BEFORE IMPROVEMENT,
SHOWING WATER AT LEVEL OF LOW TIDE

crown reserving the ownership of the bed. In practice, however, all the more important rivers are entirely open to the public.

The most obvious division of the waterways is into wide and narrow. The former comprise the large lakes, the ocean with its wide straits, large bays and other frontages, broad rivers, and in general all those waters on the borders of which vessels can be moored adjacent to proper structures erected at right angles to the shore line, and where there is sufficient space for vessels to turn when entering or leaving their berths without blocking other shipping. Narrow waterways consist of canals, canalized rivers, and some narrow branches of the ocean.

The pier and slip type of construction is normally found upon wide waterways, while the bulkhead type must necessarily be employed upon narrow ones. With a narrow waterway, because of the size of modern craft, it is usually



CHARLES RIVER BASIN, AFTER IMPROVEMENT, SHOWING
WATER AT PERMANENT HIGH LEVEL

*The reclamation of the Charles River Basin is one of the
notable waterfront improvements of American cities*

impossible to project piers at right angles to the shore whenever it is deemed necessary to increase the available berthing space in front of a given length of water frontage. Vessels must then tie against a bulkhead structure built parallel with the waterway. Three or four times the length of the largest vessel which will probably navigate a given waterway has been stated as the most advantageous width, whenever vessels must turn and enter slips built at right angles to the shore. Where vessels tie up against bulkheads built parallel with the shore line, less width is necessary. In this case allowance must be made for the vessel to tie

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against the bulkhead and to accommodate a line of river or canal craft both inside and outside the vessel when so moored. Space should also be available for vessels to pass with ample clearance in the remainder of the waterway. This means that between bulkhead structures a width of about eight times that of the normal vessel should be maintained as the total space available, and that a width of four times the normal vessel beam should also be maintained in the fairway.

Real estate on upland being so much more valuable than land under water, the course followed in most harbors is to first determine the width of waterway in the clear between pier head lines, and the distance between pier head and bulkhead lines. The area back of the bulkhead lines so determined is then solidly filled so as to make usable land. Many acres of meadow land or salt marsh surrounding Jamaica Bay, New York, the lowlands along the waterfront of Seattle, and practically the whole harbor at Los Angeles, have been created by depositing fill secured either from the upland or by the dredging of channels.

It may be said in general that the width of waterway is not so important as its continuation as far as possible into the upland. Many narrow waterways like these, at Cleveland and Chicago, for example, carry great tonnages thus serving the industrial districts which they tap. In general city planning schemes, such waterways almost invariably should be maintained because of their great industrial value.

The Federal Government is charged with the establishing of pier head and bulkhead lines, and the army engineers are exceedingly careful in their determination of proper locations for such lines. Whenever the Government has not already made a study of the situation, it is wise to secure its action at an early date to prevent

encroachments upon the waterway by short-sighted commercial interests.

WATERFRONT FACILITIES

The development upon the upland determines to a large extent the type of the adjacent waterfront structures. Three types are of greatest importance: (1) the commercial, providing for large manufacturing and shipping interests; (2) the residential type for the location of beautiful estates; and (3) the recreational use of water frontage for park and boulevard purposes.

Communication between the hinterland and the waterfront is a factor of great importance from a city planning point of view. Without a proper street system connecting the business and industrial parts of a city with the waterfront, the latter cannot fully serve its purposes. The number of streets connecting with the waterfront which are needed, in any case, depends largely upon the street traffic which must be provided for. If a port is used primarily for the transshipment of goods between large and small vessels, or between the waterfront and factory buildings located thereon, there is less necessity for an elaborate street system than if the larger part of the commerce is moved over the streets from the waterfront to the hinterland.

Facilities should be supplied not only for freight but for the transportation of people by street railway. The railroads should also be connected with waterfront structures in a more or less intimate way. On the shores of the ocean and the Great Lakes, where a considerable interchange normally takes place between water and rail carriers, the ideal scheme is one in which each railroad line reaches each element for the handling of merchandise at the waterfront. Of equal importance to the street connections with the waterfront is the shape and size of plots of land adjacent

to the water and set aside for various specific purposes. It makes a great difference whether the land is to be used for manufacturing enterprises, railroad terminals, park purposes, or residences.

There may be a wide variety in the sizes and shapes of lots for manufacturing purposes on account of the difference in the demand. A plot for a railroad terminal is of greater value to the railroad when it is long and narrow, because of the advantages in providing proper switching leads and track lengths. The boundaries of a plot set aside for a park are usually determined by the topography.

In Europe it is a common practice for municipalities to set aside large areas on the waterfront for purely industrial development. This policy has been neglected in this country. The whole tendency of modern times, however, with regard to waterfront ownership seems to be towards complete municipal control.

Special reference should be made to the valuable article on "Navigable Waters" by E. P. Goodrich in the National Municipal League volume on "City Planning," which has been followed in part as an outline for this brief summary on commercial waterways and waterfronts. Mention should also be made of Mr. Goodrich's reports on waterfront improvements for American cities. The following are general references: "Report of Connecticut Rivers and Harbors Commission," 1910; the writings of Calvin Tomkins, Dock Commissioner, New York City; Reports of the Toronto Harbor Commissioners; Document No. 7, National Waterways Commission, U. S.; "Cities and Ports," by Robert S. Peabody, and "The Port of Hamburg," by E. J. Clapp,

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DOCKS AND HARBORS

The basic principle of port and harbor organization from a city planning point of view is that a port should be developed as a unit under public control of the terms on which private carriers, shippers and consignees shall be served. The port being once conceived as an organic whole, administered by the city for the benefit of all, there can be no thought of returning to the private rivalry and mutual obstruction from which American waterfront developments still suffer.

A port at which the several parts are properly related to each other will enjoy the advantages of industrial as well as commercial opportunity. The growth of a city depends more on the establishment of factories than upon the passage and transshipment of commodities. Cheap transportation and good terminal distribution are important in factory development. City planning should aim especially to provide intercommunication between the factories at a port, its docks, and all transportation lines. Otherwise the city cannot successfully compete in the production and distribution of wealth.

Cities that are fortunate in also being ports should base their city plans upon the peculiar opportunity that the port affords. Mistakes in planning and development which exist at most of the older port cities of the United States should gradually be corrected and new improvements undertaken with reference to a preconceived design. When in accord with the general plan of the public or private terminal, improvements should be encouraged, but they should be subject to such public regulation and supervision as may be necessary to fit them into a public system of administration.

Some of the principal points which should be kept in

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BUSH TERMINAL PLANT. GENERAL VIEW FROM BALLOON



BUSH TERMINAL RAILROAD YARD. ACCOMMODATIONS FOR
2,000 STANDARD CARS

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mind in connection with the preparation of a comprehensive plan for dock and harbor development are as follows: (1) the marginal streets and railways should form the base line upon which to develop an efficient waterfront and industrial system; (2) the establishment of harbor lines and the laying out of the waterways is a matter of equal importance, these two forming the foundation for the port terminal plan; (3) the dry docks, warehouses, factory buildings, etc., are subordinate; (4) the entire port situation should be analyzed with a view to determining what purposes the various districts are best suited to serve—that is, overseas shipping, local shipping, or industrial purposes, coördinating these so as to make one unified terminal system; (5) the port terminal plan should not be burdened with details at the start, but provision should be made for the essentials, the other facilities being provided from time to time in accordance with the growth and needs of the community.

AN INDUSTRIAL HARBOR

The Bush Terminal in Brooklyn, N. Y., is the best example in the country of a fully developed industrial harbor. It comprises six factors, namely: (1) the docks where ship cargoes are discharged; (2) the bulkhead over which, by certain appliances, goods are transferred from the docks; (3) the warehouses; (4) the harbor railroad back of the warehouses, which is connected not only with them and with the main railroads but also with the loft buildings; (5) the great loft buildings for factories; (6) the residential area where many of those employed in the Terminal live.

American dock development has been well summarized in a paper by George C. Sikes of Chicago, presented to the National Conference on City Planning in 1911. He classi-

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fies docks according to the types of ownership as follows: (1) public ownership, including both state and city ownership; (2) the harbor trust; (3) railroad ownership; (4) ownership by private corporations or individuals not engaged in the transportation business, either rail or water; (5) ownership by the boat line which maintains and operates the dock facilities primarily for its own use.

The paper includes a full description of New York's municipal dock system; New Orleans under a state commission; the harbor of San Francisco; Montreal's monopoly of its port; examples of private ownership; the movement in Philadelphia and Baltimore toward municipal ownership; the benefits of public ownership; and the relation of dock development to city planning, about which the following statement is made:

"The case for the public ownership of docks becomes still stronger when considered in relation to city planning. The waterfront constitutes one of the chief features of any city located on navigable water. Proper correlations of water-carriers with other forms of transportation is of the utmost importance. Both beauty and utility call for development in accordance with a plan that recognizes the need for unity. Experience teaches that development on the basis of unity usually is possible only where the policy of complete public ownership prevails. Private rights on the waterfront of a city are likely to prove a serious obstacle to the execution of comprehensive plans that recognize all the needs of a community."

The most complete and up-to-date reference for the bibliography of docks and harbors is to be found in the "Bibliography of Municipal Government," by W. B. Munro, Section XXXII.

PARKS AND PARKWAYS

Every city worthy of the name has public parks of some sort, and they are now recognized as a necessity of city life, a part of the city plan, just as streets and schools are. They contribute to the pleasure and health of urban populations more than any other recreative feature, and furnish the most necessary and valuable antidote to the artificiality, confusion, and feverishness of life in cities. At the present time the value of parks and open spaces in towns and cities is very generally appreciated. It is recognized that such facilities as parks afford are not only desirable, but increasingly necessary, in fact, indispensable. In a vague way there is approval, too, of a large increase in both parks and playgrounds. But few even of the more progressive communities appear yet to understand with any clearness that these open spaces in cities are of great variety; that they are, or should be, selected and developed by experts to serve essentially different purposes, and that the failure to appreciate this fact and to keep it constantly in mind leads to great waste and inefficiency in our public grounds.

There are a few principles in the selection of land for parks, parkways, and playgrounds which are finding increasing acceptance by city authorities. Briefly stated, they are as follows:

1. To acquire those easily accessible small tracts in different parts of the city which may most cheaply be adapted to serve as local playgrounds, neighborhood or recreation centers.

2. To seek also some moderately large tracts, even though less accessible for the present generation, provided they are capable of conversion at relatively small cost, which will have the beauty of natural scenery.



DARK HOLLOW POND

A park-like treatment of a natural reservoir, making it an adjunct of the park system

3. To acquire property for large parks in advance of a general settlement of the neighborhood.

4. To select generally, but not always, lands which are not well adapted topographically for streets and buildings.

5. To distribute the parks and playgrounds over the city in such a way as to give the maximum of use to the people who will be called upon to pay for their acquisition, development and maintenance.

WHAT IS A PARK?

The term "parks" is used in a loose sense to cover all sorts of public grounds. City squares, commons, public gardens, playgrounds, neighborhood centers, parkways, large



SWIMMING-POOL, EAST WALPOLE, MASS.

A popular and attractive recreation feature under the direction of the Boy Scouts

outlying reservations or forests, and parks proper — all are termed “parks.”

City squares, commons, and public gardens are usually of small size, and are to be found in the business as well as the residential sections of cities. Their practical functions are to furnish agreeable views for those passing by or through them, to provide a pleasant resting place for those who take the time to use them in this manner, and in some cases to afford an appropriate and agreeable foreground or approach to public or quasi-public buildings.

Playgrounds are essentially different from squares, and should be selected and designed primarily for play. For convenience, they are usually divided into three classes: those for little tots; those for children of the school age; and

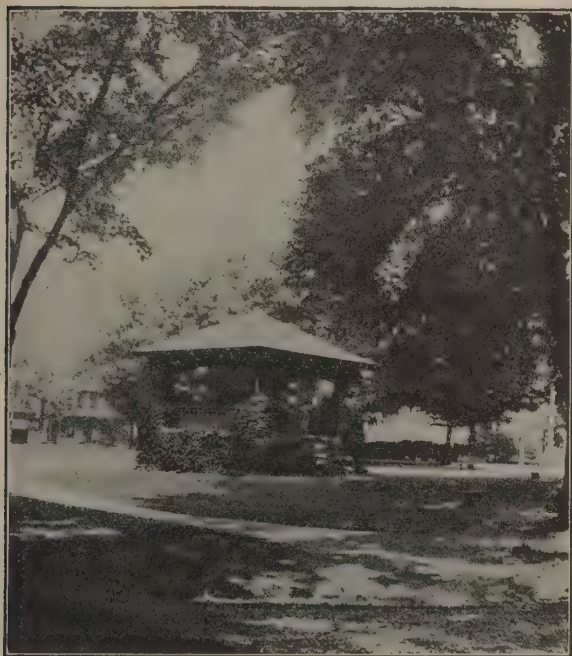
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those for older boys and men, or for girls and women. In no other department of public recreation has there recently been such a great development.

Parkways and boulevards are agreeable promenades in themselves, and serve usually as pleasant means of access to parks from the various parts of the city or as connections from one park to another. A parkway is apt to include more breadth of turf or ground planted with trees and shrubbery than a boulevard, giving it a more park-like character and inducing a less formal treatment of the roads, paths, and accessory features. Boulevards are usually arranged more formally, with straight rows of shade trees, and parallel ways for pedestrians and vehicles.

One of the chief features of a city park system is the large park, comprising from 200 to 1,000 acres or even more. Its main purpose is to place within the reach of the people of a city the enjoyment of such a measure as is practicable of pleasant, rural scenery. The justification of its size, interfering as it does with streets and other city development, is the necessity for spaciousness in the production of scenery that is broad and natural and beautiful. One of the chief problems of the landscape architect or park planner is to make these parks available and useful to great numbers of people without destroying the natural appearance of their scenery, the main purpose for which they have been created.

The conviction is steadily spreading in the United States that a city needs not only to provide itself with each class or type of recreation grounds, but that these grounds in their main or general features should be outlined, acquired, and developed as a system, each part having relation to every other part. Just as a city needs a street system, a school system, a water system, a drainage system, and systems to provide for its other municipal activities, so it



BAND-STAND, WALPOLE, MASS., COMMON

Village greens and commons are characteristic of New England towns and cities. Every place needs small open spaces in its built-up sections

needs a comprehensive, well-distributed, well-developed system of parks and pleasure grounds. As yet, few American cities have been able to secure a well-balanced park system. Some cities have a liberal provision of public squares but few playgrounds and parks and no parkways. Others have large parks and boulevards but no playgrounds, while still others have parks and boulevards and playgrounds but few public squares. Many examples could be given of the unsatisfactory, incomplete, and one-sided way in which our so-

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called park systems have been developed. The public grounds of practically all of our cities have been selected and improved by isolated and desultory proceedings. The result in most cases has led to an unnecessary waste of money and opportunity. Happily, there are exceptions. With the aid of expert advice, a few of the larger cities have worked out thoughtful and consistent plans, and in the Middle West even some small cities have conceived a system, and gradually, piece by piece, this system is being patiently acquired and executed.

Park lands bought by a city may be paid for from annual taxation, by bond issues, by special assessment, or by the application of excess condemnation.

One of the greatest influences now operating toward a better provision for parks and other recreation facilities in this country is city planning. To make parks effective, other factors of the city plan must be considered. The public works of a city are dependent one upon another. For example, it is nearly always desirable to reserve for park purposes the banks of the brooks, small rivers, and other non-navigable streams of a city, and to safeguard these channels from encroachment. This should not be done primarily because they usually afford one of the best opportunities for parks and parkways, but because they enable the community to provide adequate channels for storm-water drainage. These are necessary for safety. Without such reservations, exceptional storms are almost certain to cause disastrous floods, as the history of the American cities illustrates. Another example of inter-relation is the way in which the surroundings of parks influence the character of the parks themselves. Ugly poles and wires, preventable smoke, billboards, and other nuisances of this sort destroy the very values that parks are supposed to create, and should not, therefore, be permitted. Even the character of private

buildings abutting on park property—stores, apartment houses, saloons, etc.—should be reasonably regulated. More important still are the facilities for reaching parks. Many cities have postponed the consideration of this point until proper provision was impossible, or, if not impossible, very expensive.

Notable among the writings on the larger questions affecting public parks as a part of city planning are the reports of Olmsted Brothers; the special number of the *Annals of the American Academy of Political and Social Science*, March, 1910, entitled "Public Recreation Facilities"; the papers of Andrew Wright Crawford of Philadelphia; the article on "The Commercial Value of Parks," by W. E. Harmon, in *The Survey* of February 26, 1910; the paper of George E. Kessler on "The Actual Distribution of the Cost of Kansas City Parks"; the article by John Nolen on "Some Examples of the Influence of Public Parks in Increasing City Land Values," *Landscape Architecture*, July, 1913; "Can Public Parks Be Made Self-Supporting?" by George A. Parker, and especially the two papers on "Public Parks" read before the American Social Science Association in 1870 and 1880 by Frederick Law Olmsted, Sr.

PUBLIC AND SEMI-PUBLIC BUILDINGS

Public buildings constitute an essential element in a city plan, and first of importance is their location with regard to the city as a whole. They may be grouped in one center, or in various centers, according to the plan of the city and the local requirements. They are rightly placed when grouped in locations that will suit economic conditions and when they are readily accessible to the public.

As one of the chief factors in this subject is the growth of a city, it may be stated as a principle that the location

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of public buildings should be designed with reference to the expansion of the city. Municipal buildings, courts, halls of record, etc., naturally find a place adjacent to the business district. Custom houses and post offices belong with the railway or waterway terminals, although it is important that the post office should also be readily accessible from the business district. Public libraries, law courts, auditoriums, and other buildings of a similar nature may find suitable locations on the frontier of a business district, if not within important residential districts. In any case they should be somewhat removed from the down-town center.

The location of public buildings is bound up with the general structure of the city. This means especially the street system and the system of transportation, which is largely governed by the street system. While building groups may be advantageously placed on prominent streets in a rectangular system, or composed with principal intersections in the system of streets, yet for the more important groups the best location is at a focus of a number of streets.

HOW GROUPING HELPS

From the point of view of city planning, nothing in connection with public buildings is more essential than a consideration of the general advantages resulting from their proper grouping. These may be stated as follows:

1. Additional convenience in the transaction of business.
2. Recognition in the location of the civic center of one important feature of a natural zone system with certain incidental advantages in building regulations and fire protection.
3. Reduction to a minimum of the interference of public buildings and grounds with private business property and business interests.



WALPOLE, MASS., PUBLIC LIBRARY

Library buildings even in the smallest places are among the best public features of American communities

4. Economy in the early purchase of land, which can thus be had in large quantities at wholesale rates.

5. Better use of the same amount of land as a result of the grouping of buildings.

6. More permanence of the municipal center, and therefore greater stability of land values.

7. Margin of land for future expansion and adjustment without unnecessary expense as the need for additional public buildings develops.

8. A reasonable check upon speculative interests, and reduction or elimination of much of the bitterness due to clamoring over the selection of sites for each new public building. A logical place having been selected, the erection



POPLAR GROVE, EARSWICK GARDEN VILLAGE, ENGLAND

of buildings from time to time follows, as a matter of course, in accordance with a well-considered scheme.

9. Financial return from increased taxes due to the higher values of property near the established municipal center, and to the erection of hotels, theaters, office buildings, etc., which naturally seek the desirable locations adjacent to public buildings, and the open spaces and parks surrounding them.

10. Larger dividends from the money which the city invests in architecture and other forms of outdoor civic art; a better effect is secured for the same money, or an equally good effect for less money, than would be the case with buildings without orderly relation to each other.

11. An effective combination of many of the arts in a single harmonious composition. This combination permits the municipality to engage more highly qualified and experienced men to make plans for its civic group.



PALMER PARK RECREATION CENTER

Recreation centers provide splendid facilities for social gatherings and stimulate community coöperation and a spirit of neighborliness

12. Suitable locations for civic sculpture and the appropriate adornment of open spaces, with facilities for the incidental requirements in the way of parking spaces for automobiles, convenient car exchanges, and public comfort stations.

13. Above all, a civic group stimulates civic pride, and nourishes civic life without which a city cannot truly grow and flourish. It aids a city in its competition with other cities; it gives form to community effort, and heartens, inspires and guides the development of private property.

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In the planning of public building groups the points of special importance to note are:

1. The need of a dominant feature or building.
2. Provision for good vistas along important axes.
3. Right relation of the shapes and sizes of the open spaces to the shapes, sizes and locations of surrounding buildings.
4. Harmony of materials and of architectural styles.
5. Unity of the composition as a whole—the buildings, the open spaces, the sculpture, fountains and incidental features.
6. Distinctiveness and individuality. If possible, each civic center should be expressive, to some extent, of the special character of the city itself—its climate, its population, its needs.
7. Finally, a permanently satisfactory and convenient civic center must have a proper location and relation to the general plan of the city, especially to the system of street circulation, and to the retail, amusement and other sections used daily by great numbers of citizens.

The problem of a city's public buildings is always a local one, and must be worked out, if it is to be successful, from a careful examination of local conditions. In all cases, however, the problems must be studied with regard to the conditions of the city as a whole, and with a foresight that takes into account the city's growth. The conditions in modern times are such as to require a recognized general scheme of development of public buildings, and this recognition must be given on the one hand to the controlling conditions of economy, and on the other to those of the appropriate, dignified and beautiful expression of civic ideals.

Special reference should be made to the chapter by Edward H. Bennett on "Public Buildings and Quasi-Public

Buildings" in the National Municipal League volume on "City Planning," 1916. Other references are: the paper by Frederick L. Ackerman on "City Planning and Civic Design," Proceedings of National Conference on City Planning, 1915; Burnham & Bennett's "Plan of Chicago," 1907; "The Grouping of Public Buildings," F. L. Ford, compiler; "Municipal Art Society of Hartford, Bulletin No. 2," 1904; article by John Simpson in *Municipal Journal and Engineer*, July 7, 1909.

HOUSING

Aside from questions connected with the arrangement and width of local streets, the size of lots and blocks, and the zoning or districting of a city, the principal city planning problems of housing are more or less directly connected with the task of providing an adequate supply of suitable houses for workingmen. Such a supply can be secured only by recognizing that housing is intimately and permanently related to a number of large and difficult problems. Some of these are planning problems, some are questions of broad economic policy. For example, we have the close relation between city planning and housing—how it is influenced by the location of factories, by the proper districting of the city and by other building regulations; by the street system, and especially by the means of transportation; by the proper distribution and development of parks, playgrounds, and neighborhood facilities for recreation. Many housing schemes have been carried through as if they were isolated phenomena, and thus have failed of their purpose.

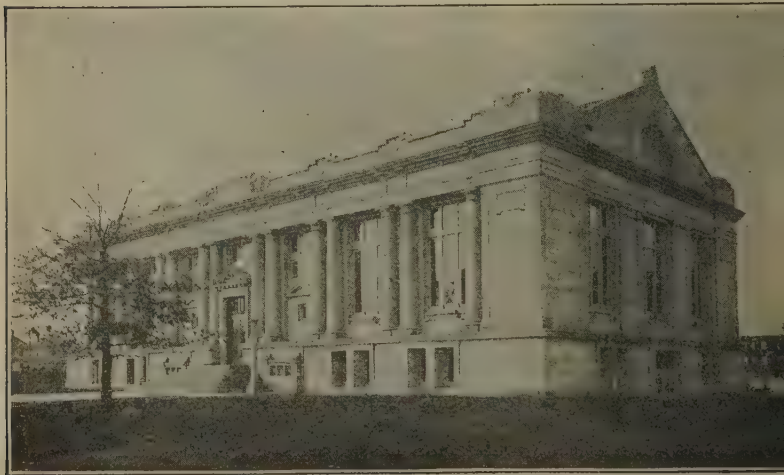
Then, housing is, of course, closely related to the building interests, materials of construction, and the loss by depreciation and fire. It is affected directly by policies with regard to land and taxation, by the prevailing practice as

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CITIES, TOWNS AND VILLAGES

to public health and sanitation, and especially by standards of living and their dependence upon the minimum wage.

From the point of view of economics—and I believe that the ultimate solution of this problem is to come mainly in that direction, housing is big business, and should be handled as big business is handled. Building operations in the United States amount annually, it is said, to \$4,000,000,000. More than half of this great total is spent in dwellings—much of it, in fact from an economic point of view most of it, is not well spent or permanently invested. A large percentage of the houses, especially the cheaper sorts, are poorly conceived for their purposes, and 80 per cent of all of them are built of wood. A frame house may be a satisfactory house provided the space between and around houses makes it reasonably safe. Too often there is an excessive depreciation and a fearfully costly fire risk. This constitutes a huge economic loss amounting by the most conservative estimate to hundreds of millions of dollars annually, which sum must be paid, as other carrying charges are paid, out of production, and finally must come out of the wage earner's pay envelope.

The first step in the solution of this problem is to recognize that the subject is primarily one for the right application of broad economic principles. We must in some thoroughgoing way convert the great forces working through regular channels which now produce bad housing, to produce good housing, and we must do it by bringing into control and coöperation with them the forces that believe in good housing and will gain from it, which are mainly the manufacturing and business interests that depend upon the efficient and happy workman. This great change in housing methods will come, if it does come, from the substitution for exploitation and excessive return, of the reasonable profits of business, from the transfer of housing

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STREETS IN HARBORNE, BIRMINGHAM, ENGLAND
Harborne is a co-partnership suburb of Birmingham. The co-partnership principle in housing has not yet been very successfully applied in the United States, but it has great merits. "Zoning" would protect residential sections from undesirable developments

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from the field of speculation, to that corresponding to legitimate manufacturing. We shall then proceed in very much the same way that the manufacturer proceeds. We shall want to know the facts as to the nature and extent of the demand. We shall have definite aims as to the product. We shall use skill and experience and factory methods. We shall back the enterprise with adequate capital and count upon a fair rate of interest.

Many housing developments have been made in the United States by real estate companies or investors which illustrate the possibilities of combining and applying city planning principles to urban and suburban development.

While a good suburban development is much more characteristic of the higher grade residential sections, much has been done also for low cost housing, especially by employers for their own employees. The following is a list of some of the more important operations: Akron, Ohio, the Good-year Tire and Rubber Company and the Firestone Company; North Billerica, Mass., Billerica Garden Suburb Company; Bound Brook, N. J., Westerly Gardens, Incorporated; Cincinnati, Ohio, J. G. Schmidlapp; Fairfield, Ala., U. S. Steel Corporation; Hopedale, Mass., Draper Company; Kenosha, Wis., Kenosha Homes Company, Kenosha Land and Development Company; Kistler, Pa. (near Mt. Union), Mt. Union Refractories Company; Ludlow, Mass., Ludlow Manufacturing Company; Marcus Hook, Pa., American Viscose Company; Middletown, Ohio, American Rolling Mill Company; Philadelphia, Pa., Octavia Hill Association; Pullman, Ill., Pullman Company; Roebling, N. J., J. A. Roebling Co.; Vandergrift, Pa., American Sheet Steel Company; Walpole, Mass., Neponset Garden Village; Washington, D. C., Washington Sanitary Housing Company; Wilmington, Del., Woodlawn Company; Woodlawn, Pa., Jones & Laughlin Steel Company; Youngstown, Ohio, The Modern Homes

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Company. A fuller list is given in Report to Bridgeport, Conn., Chamber of Commerce, entitled "More Houses for Bridgeport." The first report of the U. S. Housing Corporation has recently been issued describing the war housing of the United States.

LOCATING FACTORIES AND HOMES

One of the most important city planning aspects of housing is the removal of the factory and the home to the city outskirts, thus instituting a process of industrial and residential decentralization.

The main points for consideration in this process are the following:

1. What location generally is the best for factories in order to secure factory efficiency?

2. What location for factories and for homes for factory employees is most advantageous for the city as a whole?

3. Most fundamental of all, assuming that factories are located on the outskirts of a city, where should the men and women employed in these factories be encouraged to live?

(1) The first question is concerned with factory efficiency. So far as location goes, the main items that determine factory efficiency are as follows: (a) cheap land; (b) land in large blocks, unbroken and uninterrupted by public streets; (c) ample and convenient freight facilities and railroad sidings; (d) success in obtaining and holding employees who are well housed at low rates in a good environment.

(2) The second important question is, what location for factories and for homes for employees in factories is most advantageous for the city as a whole? This question may be answered in favor of the outskirts, for three reasons: (a) the city needs its centrally located land for business

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and commercial purposes; (b) so far as possible the city's streets should be relieved from the unnecessary hauling of raw materials of the factory's products to and from the factory through the built-up city; (c) it is desirable that the central city should be free from smoke and other nuisances often associated with factories. It is this point of view largely that has justified the establishing of the outlying industrial zone so common in European cities.

(3) The most fundamental inquiry, however, is the question of the location of the homes of factory employees. The more important advantages that are assured to workmen's homes in the outskirts as against homes in the city are as follows: (a) the opportunity for relatively cheap land; (b) proximity to the factory, and the incidental saving of time and carfare; (c) a home in the outskirts will place a workman close to the country, and to the city's outlying parks.

The following references are of special interest in connection with the relation of housing to city planning as discussed above: Proceedings of National Housing Association; Ewart G. Culpin's "The Garden City Movement Up-to-Date," London, 1912; "The Housing Problem, a Summary of Conditions and Remedies," by James Ford, Publications of the Department of Social Ethics in Harvard University, No. 5, 1911; "The Improvement of the Dwellings and Surroundings of the People," by T. C. Horsfall, Manchester, 1905; "Garden Cities of Tomorrow," Ebenezer Howard, London, 1902; "Satellite Cities," by Graham Romeyn Taylor, 1915; "Nothing Gained by Overcrowding," by Raymond Unwin, London, 1912; "Good Home for Every Wage Earner," by John Nolen, American Civic Association, 1917; "The Industrial Village," by John Nolen, National Housing Association, 1918; "The Housing Problem in War and in Peace," published by the Journal

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of the American Institute of Architects, 1918. The writings of Lawrence Veiller, Secretary and Director of the National Housing Association, are of outstanding importance.

LAND SUBDIVISION

Broadly speaking, city land, from the point of view of city planning, may be put into three main classes, namely: land for industrial use, land for retail and wholesale business, and land for residential purposes.

The subdivision of land for industrial use varies so much with the different requirements of industries that it is not possible to set down any rules for its laying out except those that are common to all planning that has to do with land. Some industries can be well accommodated on an ordinary city lot, while others require hundreds of acres, portions of it in large blocks undivided by public streets. It is more and more evident that economic and other advantages, especially in the case of large industries, follow from the location of such establishments away from the densely built-up sections of cities.

Retail business property also varies in its requirements as to land, but not to so great an extent as property for industrial use. Except in the case of new cities, laid out in advance of settlement, city business buildings usually occupy land that was originally laid out for residential use. The business districts of our cities grow naturally by extending more and more into surrounding residential neighborhoods. It is this fact which makes important the reasonable adaptability, if need be, of residential property for business purposes. As a general rule, business has much less choice than industries and residences in the selection of localities in which it may be successfully established. The locations for business are determined largely by the street and transportation system, by street widths and grades, and

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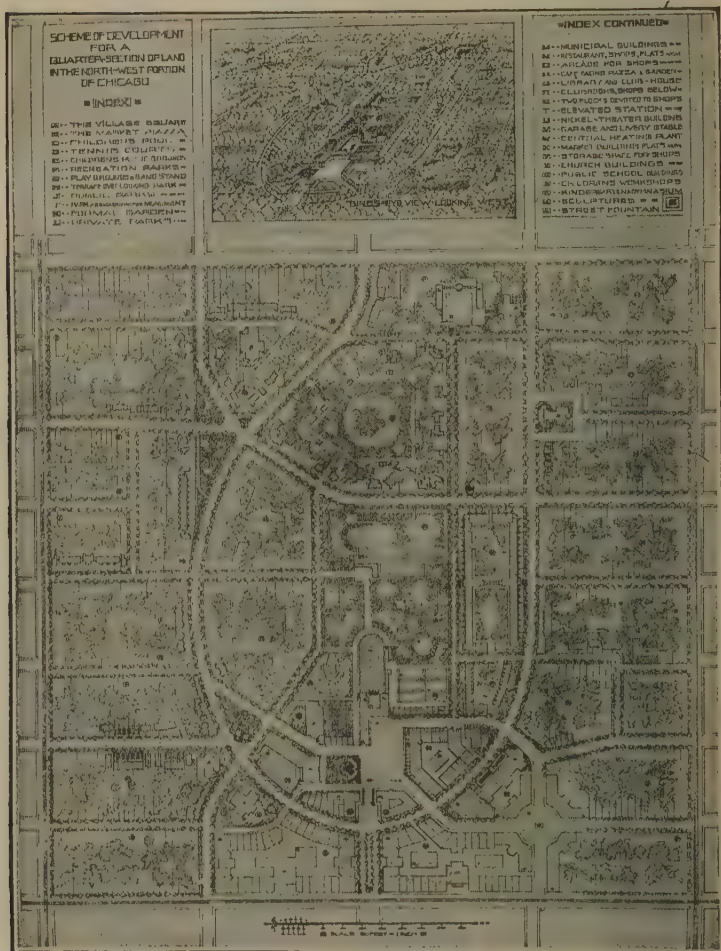
by proximity to existing business centers. Normal business requirements are fairly well met by such lot units as those typical of New York City, which are uniformly 100 feet deep, and 25 feet wide in Manhattan and the Bronx, and 20 feet wide in Brooklyn, Queens and Richmond.

The principal field of land subdivision, however, the class which concerns at least two-thirds of all city land, is residential property. In fact, when land subdivision is spoken of, it is ordinarily assumed that it refers to the laying out of land for dwellings. The evils of undesirable and unintelligent land subdivision in the case of residential property are also more apparent and more in the public eye, although perhaps not more important, than in the case of industrial and business property. There is a widespread feeling in this country and abroad that city planning has thought more of streets, of civic centers, of parks and playgrounds, and of other subjects, than it has of housing.

The central problem of land subdivision, we believe, is public regulation, control, and restriction. In fairness to all concerned, what should the real estate operator be allowed to do in this very important matter of dividing up and selling his property, cutting up land upon which people are to dwell for ages to come, changing agricultural acres wholesale into a form from which they can be changed again, if at all, only at great cost?

The principle of restrictions in the subdivision and use of land is well understood in the United States, and very frequently applied. In fact, it is so well understood and so highly valued that it is most often applied in a surprisingly thoroughgoing way by the real estate operator in his own interest. The restrictions placed upon the purchaser in the conveyance of the property often include a long list of kinds of business which are classified as nuisances, and which may not be established or maintained upon the prop-

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AN INTERESTING EXAMPLE OF LAND SUBDIVISION
 Plan receiving first prize in the competition for the subdivision
 of a quarter-section of land carried on by the
 Chicago City Club

erty. These restrictions or "safeguards" are often placed for a period of twenty-five years or more, with the right of renewal subject to the assent of the owners. But can we depend entirely upon the knowledge, skill, and motive of the owner or operator to subdivide the land and place the restrictions? At best, his action is uncertain. It is applied only in spots, often spasmodically, and even when most "public-spirited," as we say, it is not always intelligent. Again, his chief motive must be profit. He cannot reasonably be expected to have consistent and permanent concern either for the results of his methods upon the future occupants of the property or upon the general public. Then, may we not add, he does not always know what is best; and if he did, not owning or controlling all the property of the city or town, or even a large percentage of it, he would not be able to make his knowledge effective. Furthermore, he has only the power of a private citizen.

There are, of course, technical problems involved in land subdivision, and their solution requires skill and experience. Furthermore, these problems of land subdivision are related to still wider and more difficult technical problems of city planning, city building, maintenance, and administration, all requiring still greater skill, knowledge, and experience.

Land subdivision, as the term is used by landscape architects and engineers, determines the location and width of streets, roads, alleys, and other open spaces; the location, depth and length of blocks; the location of lot lines, and other physical features. When the subdivision is made upon the initiative of the real estate operator, and sometimes when it is made upon the initiative of public authority, it determines also building lines, restrictions, and conditions of development.

THE RIGHT WAY TO DO IT

Some of the underlying principles of land subdivision generally accepted as sound may be briefly stated as follows:

1. The plan for the subdivision of property should fit the topography, and give due consideration to natural features.

2. Even if the land is relatively level, the plan should nevertheless have interest, good organization and design. The point of view that leads to a good arrangement on hilly ground gives also a good arrangement on level land.

3. The use that is to be made of the land should determine its general plan and restrictions. There is no plan that is best for all places, nor for the same place for all time. Merit is largely a question of fitness for its original purpose, and its adaptability for probable future purposes.

4. Thoroughfares, and other broadly related city planning features, should be located first, and within these lines, and in conformity to them, local streets, blocks and lots should be defined in the best possible manner.

5. The various standards for various classes of property, the lot widths and lot depths, the block widths and block depths, recognized by the best authorities, should be applied with skill and discrimination. These are by no means absolute or fixed; they are still open to discussion, and in each case are largely matters of nice judgment.

6. An increase of lots or residence sites by new land subdivisions, and of the necessary streets, should be accompanied by a corresponding increase of playgrounds, parks, and other indispensable public features required by the probable population of the area when fully built up.

7. The interests of the real estate operator, of the prospective owner or user, and of the general public, should

be harmonized as far as possible. In most cases, this is not so difficult as it might seem. While the immediate interests of the three parties are not identical, they are not in the long run normally in conflict.

8. A plan for dividing land must consider not only immediate use, but also probable subsequent use, administration, and maintenance, and must, so far as possible, forecast and provide for it. This may be done in part by the plan itself, and in part by binding restrictions and conditions, providing for permanency, or it may anticipate a change or conversion into a different use.

Special mention should be made of the chapters on "The Subdivision of Land" and "Residential and Industrial Decentralization" in the volume on "City Planning" in National Municipal League Series; also to the following: the article by Andrew Wright Crawford on "The Interrelation of Housing and City Planning," *Annals of the American Academy of Political and Social Science*, January, 1914; "Progress and Poverty," by Henry George; "Principles of City Land Values," by Richard M. Hurd; Report of the Committee on City Planning Study to the National Conference on City Planning, Chicago, 1913; Proceedings of the National Conference on Housing, 1911 to date; article by John Nolen on "The Factory and the Home," Proceedings of the National Housing Association, 1912; paper by Lawrence Veiller, in Proceedings of the National Conference on City Planning, 1911; also "Housing Reform: A Handbook for Practical Use in American Cities," New York, 1910, and "A Housing Programme," a National Housing Association Publication, June, 1912, by the same author, and "City Residential Land Development—Studies in Planning," edited by Alfred B. Yeomans; "The Industrial Village," by John Nolen, National Housing Association, 1918.

ZONES OR BUILDING DISTRICTS

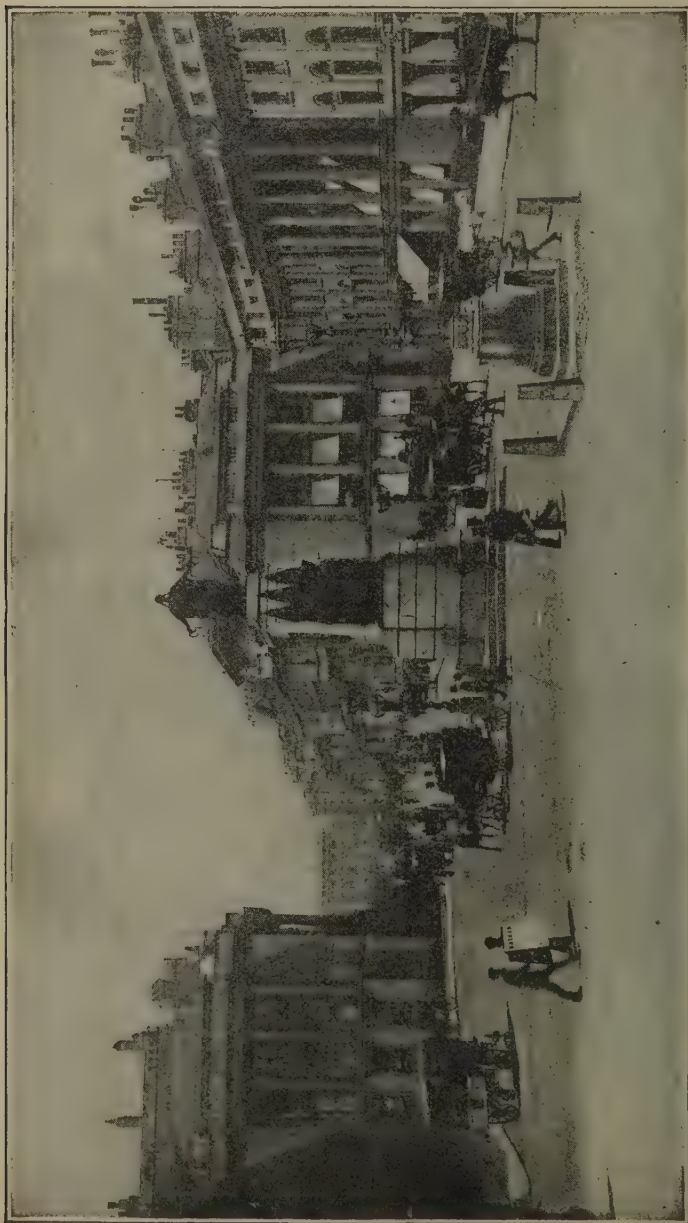
The districting or zoning of a city is, or should be, one of the three fundamental parts of every comprehensive city plan. The other two are: channels of transportation, including railroads, streets and waterways; and public open spaces, parks, playgrounds, etc. Districting is as far-reaching and important as each of the others, but it is singular in this point, that it costs the city nothing to put it into execution. The other fundamental features of a city plan are costly. The cost, I believe, is fully justified, and may actually afford a net income. But districting involves no cost other than the trifling sum needed for the study of the problem and the preparation of a plan. In fact, if the districting is wise, it will afford not only stability, but additional income to property owners, and also to the city. Such a plan for districting should be part of a comprehensive city plan, as the New York Committee has advocated. Provision for main thoroughfares and for rapid transit, the selection of land for parks, and other features of a city plan, will surely affect the districting of the city.

The action of the City of New York in approving the report of the Commission on Building Districts and Restrictions is, perhaps, the most important single step that has been taken in this country in the planning of cities. The principles which are fundamental in the Commission's plan are as follows: 1. Provision for light and air is a primary essential in building regulation. 2. Building regulations in each section of the city should be adapted to the requirements of that section. 3. It is desirable, as a general rule, to treat all buildings in a given block according to a uniform rule, because there should be a substantially uniform contribution from each owner to the light and air of the block. 4. A building is usually appropriately located

when it is surrounded by buildings of similar type and use. Order in building development is essential to the health, safety and comfort of the public, and the best means of conserving and enhancing values. 5. All residence sections should be protected against unnecessary invasion by commercial and industrial users.

The gist of the New York regulations may be stated as follows: all future buildings will be restricted as to their height, size and use, the restrictions being different in different parts of the city; the height of buildings will vary with the width of the street, from one time to two and one-half times, with exceptions for buildings set back from the street line and for towers; specified areas of open space are required in the different zones for yards and courts, these automatically increasing with the increased height of the buildings; in use, residence and business districts will be reasonably protected from the invasion of industry and manufacturing. The law is not retroactive. It applies only to the future, and reasonable changes in the law have been provided for. Nothing is said about the effect of the law on the appearance of the city in the sense of making it more beautiful, but it is recognized that the result will be a more orderly and more harmonious city, and therefore more attractive.

A point of controlling importance is the fact that the law is administered under the police power of the state without compensation to property owners for the effect of its regulations upon the value of their property. Fortunately for those interested in this movement, a recent decision of the United States Supreme Court upholding the right of the City of Los Angeles to remove a manufacturing plant from a residential district fixes the essential principle involved in the establishment of differentiated building districts. Justice McKenna said, in rendering this opinion, "A



WATERLOO PLACE, LONDON

Street intersections afford special opportunities for the development of building sites and the placing of monuments

vested interest cannot be asserted against the police power of a state because of conditions once obtaining. To so hold would preclude development and fix a city forever in its primitive conditions. There must be progress, and if in its march private interests are in the way, they must yield to the good of the community." It may be added that the New York Commission in doing its work held to an extremely conservative point of view, even for New York conditions, and tested each proposal with a query as to whether it would tend to improve health, safety, and general welfare.

The disappointment in the New York law, among those interested in the improvement of cities, is in the low standard that existing conditions made it necessary apparently for New York to adopt. While the principles are sound and the methods of procedure worthy of the highest praise, the standards established by New York, if followed by any other city in the United States, with possibly one or two exceptions, will be harmful rather than beneficial. One has but to compare the regulations of a European city with those recently adopted in New York by the Districting Commission to realize how far we have fallen in our city building methods.

It is surprising that so few American cities have acted in this matter. It is now the one great outstanding opportunity in city planning. The New York principles point the way, and the courts have given an unqualified endorsement as to legality. The public mind is awakened. Conditions are peculiarly favorable. Action should follow rapidly, but it should be based upon a survey of local conditions and be accompanied by a comprehensive city plan of which the districting should be an integral part, perhaps the principal part, so far as immediate action is concerned.

Further discussion of questions relating to the establish-

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ment of building districts or zones in cities can be had in the writings of Frank B. Williams, Lawson Purdy, Robert H. Whitten and others. Note especially: "Legal Methods of Carrying Out the Changes Proposed in the City Plan for Bridgeport," by Frank B. Williams. This same subject is ably presented in brief form in an article by George B. Ford in *Landscape Architecture* for October, 1916. Another important reference is the volume by Flavel Shurtleff and F. L. Olmsted entitled "Carrying Out the City Plan."

Chapter 6

Legislation and City Plan Authorities

In an address on City Planning Law in the United States, Frank B. Williams, of New York, has discussed the general principles, pointing out that the power to plan cities, in common with all power over subdivisions of the country or state, belongs to the state itself. In a government like ours, the sovereign states surrender to the Federal Government only the power over certain specified subjects of general concern, retaining each to itself, power over matters of state concern. In the main, municipal government including city planning is a matter to be dealt with by the individual states.

Much has been said and written recently about the right of municipalities to local self-government. Within certain limits, as yet very imperfectly defined, cities should have the power to control their local affairs, and there is a growing tendency to give them this power in city planning, as in other matters. Legally, however, localities are entitled to exercise governmental functions only in so far as the sovereign state has bestowed them upon the city or town.

One of the big questions in legislation is the city planning agency. In American city government, almost every expansion of public activity is initiated through the instrumentality of a new board or commission. Existing officials are already loaded with work, and it is thought that they will have neither the time, the inclination, nor perhaps the ability to develop the new idea. A new commission, composed usually of unpaid members, therefore, is employed.

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If the new function takes root as a permanent institution, the commission becomes permanent, and sooner or later is merged with the general governmental organization.

The city planning movement is no exception to this rule. Commissions have already been appointed or organized in many cities, some official and some unofficial, and one of the most vital questions in connection with city planning at the present time is the character and power of the agency which should be used to do the city planning work.

Some of the tentative conclusions in connection with city planning commissions are the following:

1. It is considered better, on the whole, to have a commission made up mainly if not entirely of lay members.

2. The types of men on the city plan commission should include representatives of the business, professional, and perhaps also of the laboring classes. It is likewise important to consider whether there should not be some women members.

3. The term of members should be long enough to give stability to the work, and should overlap, so as to provide reasonable continuity of policy.

4. The question of payment of members of the commission is a mooted one. Much would depend upon the size of the place, the state of development of the work, and the amount of time required. In the beginning it would probably be better to have unpaid commissioners.

5. One of the best methods of advancing the city planning work is to provide a city plan office, with an engineer, landscape architect, or city planner in charge; a secretary for clerical work, and other necessary assistants. The two principal functions of the city plan office would be the collection of local data, and the preparation under the direction of experts of a comprehensive city plan. Local data and the city plan should both be constantly revised

and kept up to date. Authority to employ experts or technical assistants would be involved in a city plan office.

6. The question of annual appropriation for city planning depends greatly, of course, upon the city planning program which confronts the city under consideration. It is safe to say that an efficient city plan office for a city of 100,000 population would require, for routine work, an annual appropriation of \$10,000 or more, and that relatively large cities ought to have \$50,000.

7. The procedure necessary to make the city plan effective is difficult to outline briefly, as it involves the whole question of the organization of government. In general, final authority should rest with the city government. It would probably be well to require that a veto of a project by the city plan commission could be overridden by the city government only by a two-thirds vote, or, at any rate, by a repassage of the measure. The only exception in the matter of control by the city government might properly be the approval of new plans for the extension of the city.

8. A complete city planning organization requires, it would seem, a state planning board or department of municipal affairs. Like many other state boards, such a planning board or department dealing with city government might be largely advisory. An exception, perhaps, should be in dealing with those matters which concern two or more political jurisdictions. Such a state board would be a great help in the solution of city planning problems beyond the city limits, and in dealing with the towns and smaller cities.

In order that city construction may be intelligently carried on, it is necessary that there should be a plan of the city as a whole, by which the planning of any part or detail of it at any time may be guided. The making of the plan, however, does not of itself in any way control city

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construction. Therefore cities are beginning to insert in their charters the provision for the adoption officially of a city plan, the effect of which is to make it unlawful for any official or city employee to depart in city construction from the plan adopted. The power officially to adopt or change the city plan should be lodged with the common council, or other regular city authority.

One useful, if not indispensable, power in the construction of the public features of a city is that of excess condemnation. Under our national and state constitutions, private property may be lawfully taken only for public use. In constructing a street, a park, or almost any other public works, it is often desirable to take land outside the physical limits of the main improvements. This is done for some purpose regarded as incidental to the principal enterprise. •

The early advocates of excess or incidental condemnation urged it chiefly as a method of recouping a part of the cost of public works. This phase of the subject is considered in the next chapter. The greatest need of excess condemnation, however, is as a method of controlling the land adjacent to a public improvement. For example, the cutting through of new streets or the widening of existing ones necessarily leaves outside the lines of the street remnants of lots of such a size and shape as to be unsuitable for building. For this reason the city without the power of excess condemnation often pays the owner of the lot nearly the value of the entire lot. The remnant itself is unsuited to development, and shuts off the property back of it from the street and prevents its improvement also.

The guidance of private development is an important field of public control by legislation. In the absence of such control it is impossible to insure proper city development.

Building regulations to secure light and air, so necessary

for the public health, are by no means new, but it is only in comparatively recent times that the importance of light and air in great abundance has been fully realized. Therefore, not only to prevent fire, but to furnish sufficient light and air and sunshine in the interest of public health, building regulations limiting the size of structures with relation to the lots they occupy are essential in the planning of the modern city.

There has also come the recognition recently that it is practically impossible to enact fair and adequate building regulations which shall be the same for the entire city. In all cities there are districts where there is great concentration. To pass regulations securing for land that is vacant in such districts anything like adequate light and air would be to discriminate sharply between occupied and unoccupied lots in these districts. On the other hand, any regulation that would be fair to these congested districts would be practically inoperative in sections of the city where values neither demand nor warrant such intensity. The only regulations at the same time reasonable and generally effective are those varying with the varying land values and conditions of the different parts of the city. Thus districting is the only practical method of preventing the spread of congestion.

There is no phase of city planning legislation more important than that relating to the obtaining of the necessary money by methods that are just, and will not create hardships. Of all the methods, the one that is most just, that may be applied with the least hardship, is that of local or benefit assessment. This method prevails in most cities, and has been applied with regard to the construction of streets, sewers, etc., also public parks and civic centers. There is no reason why its application should be limited to the fields which it now occupies. The broad principle

should be recognized, as Mr. Nelson P. Lewis, of the New York Board of Estimate and Apportionment, has well said, that where there is local benefit, there should be local assessment.

Other important subjects in connection with legislation and the raising of money for large public improvements are the legal limit of city indebtedness, borrowing on local assessments, and the place of self-supporting improvements in estimating a city's liabilities and their effect upon the debt limit.

The most valuable single book dealing with the subject of legislation has been issued by the Russell Sage Foundation. It is entitled "Carrying Out the City Plan," and gives the practical application of American law in the execution of city plans. The author is Flavel Shurtleff, and the work was done in collaboration with Frederick Law Olmsted. The book deals with public ownership of land, the acquisition of land, the distribution of the cost of land acquirement, excess condemnation, the use of the police power in the execution of a city plan, and the work of administrative agencies. The appendices give legislation and decisions, and extracts from a report on English and Continental systems of taking land for public purposes.

The most concrete illustration of legal methods of carrying out city planning proposals has been prepared by Frank B. Williams in connection with the city plan for Bridgeport, Conn., issued in 1916.

Other references of special value are to be found in the report of Walter L. Fisher on "Legal Aspects of the Plan of Chicago," 1909, and Charles Mulford Robinson's volume on "City Planning," which contains five chapters on city planning legislation.

Chapter 7.

The Cost of City Planning

There are two ways of considering the cost of city planning. The first would be merely the cost of making city plans, which is relatively a small sum, even for the largest cities. There is an urgent need to provide an appropriation sufficient for the preparation of a comprehensive city plan of a general character for all cities. In fact, it should be extended to towns, and even villages. There is a need also for a permanent city plan office which would do the routine work of city planning after a comprehensive city plan had been prepared. Such an office would keep the plan up to date, and would also continue regularly the collection of the fundamental data upon which good planning should be based.

The other way of considering the cost of city planning, however, is that involved in connection with the carrying out of public improvements. Of course, the cost of most of these improvements must be provided, with or without comprehensive planning. City planning does not necessarily involve an increase in these expenditures. In fact, the figures for a long period, assuming that the same standards are applied, would usually show a decrease in the cost of carrying out public improvements under a city plan, as against carrying them out without such a plan. City planning really pays.

With the physical growth of a city there has not always been a corresponding development of a financial plan to

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meet larger needs. The responsibility of the city planning agency is not only to show the soundness of its suggestions for the physical improvement of a city, but also to present a plan for financing them.

The principal methods available for financing great public projects of cities are bond issues, special assessments, and excess condemnation.

The limit of a city's borrowing ability, that is, the amount of net indebtedness which cannot be exceeded, is generally fixed either in the state constitution or city charter, as a certain per cent of a city's assessed valuation. This percentage varies greatly, being as high as ten, and as low as two. Where the limit of bonded indebtedness is under five per cent of the assessed valuation, the requirements of municipal life, according to American standards, can scarcely be provided. It has become a general practice in defining what is meant by net indebtedness or borrowing ability to exclude the bond issues which are made for self-supporting utilities; for example, for water and lighting.

The terms of years for which bonds should be issued for various city purposes is an important factor in their actual cost, and the amount that can be safely issued. This is well illustrated in a paper presented at the Sixth National Conference on City Planning by Andrew Wright Crawford, of the Philadelphia Bar, in which he pointed out that the efficient life of a thing constructed by the proceeds of municipal bonds should measure their term. In determining the length of the efficient life of a municipal improvement, city planning is indispensable. Hence, the issuance of city bonds calls for city planning as a prerequisite. As illustrations of his method, he proposes that bonds for parks might run seventy-five or one hundred years; for street pavement, in the neighborhood of fifteen years; stone and concrete bridges, seventy-five years, etc.

The levying of an assessment on property which has received a special benefit because of an improvement is a method which is particularly attractive to American planners, first, because it is based upon the equitable principle of putting the burden on the properties that are directly benefited; and second, because it relieves general taxation. There are many striking examples of the increase of value of private property through the expenditure of the community's money in street widening, and in the establishment of parks and parkways. Kansas City is one of the best illustrations of parks.

The justice of the special assessment method appealed so strongly to Nelson P. Lewis, Chief Engineer of the Board of Estimate and Apportionment, New York City, that he has presented the subject in a monograph entitled, "Paying the Bills for City Planning," and as a result of his statement the National Conference on City Planning in 1912 adopted a resolution embodying the principles which he advocated, the most important of which is "that where there is local benefit, there should always be local assessment on the land benefited."

Desirable results are claimed for the method of financing improvements long practiced in some European countries, and known in the United States as excess or incidental condemnation. By constitutional amendment in Massachusetts, New York and Wisconsin, municipalities may acquire by purchase or condemnation, more land than is actually needed for the construction of the improvement, with the right of resale after the completion of the improvement. Its value as a financial expedient for city planning has not yet been fully decided in the United States. The principle is in some respects contrary to the spirit of individual rights, and its headway cannot be expected to be rapid. There is also, of course, a chance of loss. The city becomes to some ex-

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tent a speculator in land. Values may not rise as much as estimated, and the increase may be offset by carrying charges. It should be added, however, that the power of excess condemnation has great value as a means of control in connection with the environment of an important public improvement. Through the purchase and resale the municipality has an opportunity to place effective restrictions upon the use of the private property adjacent to the improvements carried out by the public.

The financial methods proposed for getting more for the community's outlay and for making the community's money go farther presupposes a city plan. Such a plan will divide the city by differentiated building regulations, and thus increase the desirability of each district or zone for its purposes, and thus also increase municipal revenue. A plan for the extension of thoroughfares and for rapid transit lines for large cities will tend to stabilize real estate values, and make special assessment for benefit derived more equitable to the property owner, and more remunerative to the community. The chief financial return of city planning, however, is in the prevention of error of physical development and the consequent waste of community money.

A brief list of references of special value is as follows: Annual Reports on the Comparative Financial Statistics of Cities and Towns, by Charles F. Gettemy, Boston, 1906-12; R. M. Hurd's "Principles of City Land Values," New York, 1905; N. P. Lewis' paper on "Paying the Bills for City Planning," Proceedings of the Fourth National Conference on City Planning, 1912; the paper by Lawson Purdy on "Condemnation, Assessments and Taxation in Relation to City Planning," Proceedings of Third National Conference on City Planning, 1911; and the volume on "Carrying Out the City Plan," by Flavel Shurtleff and F. L. Olmsted, 1914.

Chapter 8

Professional Training and Experience

Students of city planning may become qualified for professional work in the following ways:

1. There is some opportunity for training and experience in the offices of competent practitioners.

2. Facilities afforded for special study in libraries are a collection of plans and other professional materials; also, exhibitions, and conferences, especially the annual sessions of the National Conference on City Planning.

3. From time to time, city planning tours and trips for observation of city planning works have been arranged, notably in Europe. As illustrations, mention may be made of the tour conducted by the National Housing Reform and Town Planning Council (of England) in connection with the International Housing Congress at Vienna in 1910; the Garden City and Town Planning Association Easter tour to Essen, Cologne, Düsseldorf, Frankfort, Mannheim, Heidelberg, Ulm, Nuremberg, Dresden, etc., in April, 1911; the Continental Town Planning visit to Nancy, Frankfort, Geneva and Berne under the auspices of the National Housing and Town Planning Council in 1912; the Town Planning Lecture tour organized by Mr. Charles C. Reade to principal towns of Australasia in 1914; and the First Congress and Tour of the International Association of Garden Cities in July, 1914, which included parties from America, Austria, Canada, France, Germany, Great Britain, Italy, Poland, Russia and Spain.

4. The main reliance, however, for education and train-

ing in preparation for city planning work must be placed upon the courses of study now offered in universities, colleges, and technical schools. Nine educational institutions in the United States are now giving instruction in city planning. They are as follows: the University of California, Division of Landscape Architecture, offering courses in Modern Civic Art and City and Town Planning; the University of Illinois, Division of Landscape Gardening, offering courses in Town Improvement, Civic Design, Landscape and Planting Design, and Office Practice; the University of Iowa, Department of Civil Engineering, the Elements of City Planning; the University of Michigan, Department of Landscape Design, offering courses in Civic Improvement, Parks and Playgrounds, and the Principles of City Planning; Pennsylvania State College, Department of Horticulture, offering courses in Modern Civic Art and Landscape Design; the University of Pennsylvania, Wharton School of Economics, Economic Aspect of City Planning and Housing; Throop College of Technology, Department of Civil Engineering, offering a course in City Planning, required for all engineering students; University of Wisconsin, College of Mechanics and Engineering, offering an elective course in City Planning. The most complete course of instruction in the subject is that provided by Harvard University in its School of Landscape Architecture. It offers a complete professional course of three years, providing lectures and design work as follows: 1. *Principles of City Planning*. A comprehensive view of the subject of city planning and opportunity to develop the idea of the modern city as an organic whole, the perfect efficiency of which demands attention not only to the best service of many separate functions, but also to the perfect inter-relation of its component parts. 2. *Practice in Design*. Study of actual work and of the solution by the students

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of actual problems presented to them in definite form. 3. *Principles of Construction*. Roads, streets and walks in relation to traffic; street construction; municipal water supply and distribution; municipal sewerage and disposal of wastes. 4. *Planting Design*. Problems, lectures and field work, dealing with various aspects of city planning.

Valuable courses for education and training in preparation for city planning work are also offered by the London Summer School of Town Planning. In the United States the only opportunities corresponding to the London School are the courses in Housing and Town Planning offered in connection with the Summer School of the University of Pennsylvania. The relation of local commercial and civic organizations to city planning is given considerable attention at the American City Bureau's Summer School of Community Leadership.

The most complete outline of college and university instruction in city planning is to be found in Charles Mulford Robinson's article in *The City Plan* for April, 1916. Other references of value on this subject are "Civic Design—Its Study and Technology," in the volume on "Civic Art," by T. H. Mawson; the article on "The Department of Landscape Architecture in Harvard University" in *Landscape Architecture*, January, 1911, by J. S. Pray; and Chapters VIII, IX and XIII in "Cities in Evolution," by Patrick Geddes.

Chapter 9

New Towns and New Standards

For several years we have discussed housing and town planning primarily from the viewpoint of its effect upon the war. We were concerned then, first of all, with winning the war. We believed then, as we believe now, that a proper housing policy was an essential part of a war program. We came again to the statement that you can't man the works unless you house the man. Also that you can't keep the man at work unless you house him properly.

There was a recognition, too, of the effect of the characteristic housing and town planning of a nation upon the efficiency of an overseas army — its bodily vigor, its intellectual alertness, even its patriotic enthusiasm and that great quality which we call morale. These influences are exhibited not only by the house itself, but by the entire home environment of the local community — its streets, its stores, its schools, its parks and recreation places. Indeed it has been said that the patriotism of men is of a somewhat higher order if they come from cities having irregular plans, cities that are picturesque, interesting and beautiful, as contrasted with those that are dull gridirons, commonplace and ugly.

Today we have shifted our emphasis and attention. In place of considering the effect of housing upon the war, we are beginning to look around and ask, what influence has the war had upon housing? The effect surely has been mixed. In some directions, undoubtedly, housing standards have been lowered. Many examples could be given. We have had to accept as a part of war's necessities the disadvantages

and dangers of a makeshift housing policy, a policy which emphasized the "Take a Roomer" campaign, the solution of housing requirements not by an addition to the supply of houses, but through transportation. The result has been that during this war emergency even housing reformers have patriotically closed their eyes. However, the lasting effect of the war upon housing will, I believe, be good. At least we have an opportunity to make it so.

PERMANENT HOUSING

The so-called "standards" recommended for permanent industrial housing developments by the Bureau of Industrial Housing and Transportation are a notable achievement. They were adopted by the Bureau after months of open-minded and vigorous discussion by a representative group of men. This body included architects, engineers, landscape architects, town planners, contractors, physicians, housing experts, social workers, realtors and others.

A number of essential ideas should be noted in connection with these housing standards of the Federal Government. In the first place, they are standards for permanent construction. As a matter of fact, the government standards for temporary construction are in many ways equally worthy of review and praise. But they are not the subject of this discussion.

A second essential idea is that, while these standards were adopted with a firm determination that they should control, their application was to be discriminating. Common sense was to have its proper place; also local custom. Therefore the Housing Bureau recommended in its very first paragraph that these standards were not intended as inflexible requirements, but added that any plans which failed to conform to the standards were not likely to be accepted unless supported by very strong reasons.

The standards as put forth by the Government are comprehensive. The nine types of houses included cover virtually the whole field. They are as follows:

1. Single family house.
2. Two family house.
3. Single family house with room for lodgers or boarders.
4. Lodging house for men.
5. Hotel for men.
6. Lodging house for women.
7. Hotel for women.
8. Tenement house.
9. Boarding house.

MOST IMPORTANT STANDARDS

Attention can be most profitably directed to three outstanding proposals, each absolutely fundamental to good housing, and each unfortunately more or less in conflict with the common practice of our time.

These three outstanding general proposals are:

First—That row or group houses are not normally to be more than two rooms deep.

Second—That side yard space between adjacent buildings is to be at least 16 feet and preferably 20 feet.

Third—That tenement and apartment houses are considered generally undesirable, and will be accepted only in cities where, because of high land values, it is clearly demonstrated that single and two-family houses cannot be economically provided or where there is insistent demand for this type of multiple housing.

If nothing else were accomplished by the formulation of government standards, the cause of good housing would owe an unending debt of gratitude to the agency that set down

in determined form the Government's belief in these three fundamental proposals.

But of course there are many other points that are worthy of praise and of wider adoption. They run all through the list of subjects for the various types of buildings with which those concerned about housing are familiar — the materials of exterior walls, the size of windows, the height of buildings, fire protection, the size and number of rooms, the all-important plumbing, the character of fences, allotment gardens, free standing beds, the need for a clothes closet in every bedroom, etc. Two groups of six topics each appear to be of greatest importance and significance. These deal mainly with the single family house. The first group relates primarily to the character of the house itself, the second to the town planning features that do so much to make or mar the house as a satisfactory home.

THE HOUSE ITSELF

In the group determining the character of the house itself, I should name as most important the following standards:

1. That row or group houses are not to be more than two rooms deep.
2. That cross ventilation as direct as possible is to be provided for all rooms.
3. That no living quarters are to be in basements.
4. That a minimum clear space of eight inches is to be provided between the ceiling and the roof, with adequate ventilation.
5. That five-room houses are to be preferred for higher paid workers, and four-room houses for lower paid workers.
6. That every house is to have one large bedroom and a parlor or living room from 10 x 12 feet to 12 x 14 feet in size.

TOWN PLANNING

In the town planning features the regulations of most far-reaching effect are:

1. That side yard space between adjacent buildings is to be preferably 20 feet, with a minimum of 16 feet.

2. That the group house should be used wherever lot sizes or land values make it difficult or impossible to provide adequate side yard space.

3. That rear yard depth is to be not less than the height of building, nor in any case less than 20 feet, and the minimum distance between the backs of houses at least 50 feet.

4. That front yards or setbacks are desirable where practicable, and the minimum distance from the front of the house to the front of the opposite house is to be 50 feet.

5. That private alleys will not be accepted, but that access to the rear of houses may be made through minor public streets, such streets to be not less than 12 feet wide, and to be properly paved, curbed, drained, and lighted.

6. That the tenement and apartment house is to be considered an undesirable house type, and accepted only in places where other types are not practicable.

ARE STANDARDS NECESSARY?

It is natural to inquire here, should self-imposed standards be adopted to control government housing for war needs? Why should not the aim be the largest possible amount of housing at the least possible cost? I believe there are two substantial reasons. The first is that this method would defeat its own primary purpose. Not the largest amount of any kind of housing, but the largest amount of satisfactory housing, is essential. Contentment and efficiency are dependent upon satisfactory housing, and without contentment and efficiency the war needs of labor would not be well served.



HAMPSTEAD WAY, HAMPSTEAD GARDEN
SUBURB, ENGLAND

*The ideals of new towns and new housing standards have
to some extent already been realized in the typical
English garden cities and suburbs*

The second reason is that even in the most engrossing days of war, when many things had to be done which we might have wished otherwise, an effort was made to hold to the human requirements of the workman and his family. There are laws of human well-being — scientific laws — and we now know better than we ever knew before that in the long run it pays to follow them. In this respect housing is not peculiar. There are standards in food, in clothing, in ships, in munitions, in factory buildings, in motor vehicles, in airplanes, and in all the vast complex material of the modern world.

But if we agree that there should be housing standards, by what method should they be fixed? Should they be determined by the wages that workmen receive and rent that workmen can afford to pay, or by an economic rent on land,

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WALPOLE MASSACHUSETTS TYPICAL STREET SECTIONS

WITH
LIST OF STREETS UNDER EACH TYPE
John Nolan Landscape Architect
Harvard Sq. Cambridge Mass.
1919



MINOR STREETS
THIRTY FEET WIDE



SECONDARY STREETS
THIRTY FEET WIDE
(Secondary Streets 30 feet wide
are the same with two feet
added to each sidewalk)



MAIN STREETS
FIFTY FEET WIDE



THOROUGHFARES
EIGHTY FEET WIDE



SECONDARY STREETS
FIFTY FEET WIDE
WITH CAR LINE
(One line on each side of road to space
uniformly in relation to building frontage)



MAIN STREETS
FIFTY FEET WIDE
(Temporary Development)



THOROUGHFARES
EIGHTY FEET WIDE
(Temporary Development)

building and utilities — a return, say, of 10 per cent gross or 5 per cent net on the invested capital — or by the accepted but constantly changing minimum requirements of safety, health, convenience and comfort? Or should they be determined by all these requirements considered together? It is my opinion that if these government standards have one merit more than another, it is their endeavor to harmonize so far as possible all these various requirements.

Housing is on the new map of the world. Its place and boundaries are changed permanently. Public opinion has shifted, and in the right direction. No statesman who aspires to power and honor in the new régime can fail to include it in his reconstruction or readjustment program. The men

in the service expect to find on their return a new and better type of workman's home.

Unless all signs fail, housing reform is to be part of our new standards of action. Like new standards of action in other fields, housing is to be changed through three influences that are spreading far and wide. They are coöperation, a new scale of money expenditures, and a raising of democratic ideals. The years of the war have given innumerable illustrations of what coöperation can do. We are no longer daunted by cost, if the thing for which the money is to be spent is worth it.

Great Britain has gone further than the United States in its housing and town planning program for the reconstruction period. In outline its formula for new towns after the war may be stated as follows:

"It is now possible to give the bare elements of the garden city idea in a brief formula of general applicability — a scientific constructive prescription which, if this reasoning is sound, ought to influence the development of all industrial towns, new and old:

"A town should be of a population large enough to allow of efficient industrial organization and full social activity; but no larger. The urban area should be limited to a size requisite to house this population well, and should be surrounded by a zone of open land large enough to possess a distinctively rural and agricultural character.

"The whole of the land, including the urban area and the rural zone, should be owned and administered in the interest of the local community."

The reduction of this formula to figures and dimensions requires a longer analysis than is possible here. There is little doubt that a population of 30,000 would be ample for industrial purposes in almost any district of Great Britain or Ireland; on the present average scale of manufacture it

would permit of a very considerable diversity of industry within the town. But judging by the example of existing country towns, there are some social advantages to be gained by having a population as large as 50,000. To accommodate such a population well, according to modern town planning standards, would require an urban area of about 2,000 acres — with an average density of 25 persons to the acre. A town of this size and roughly round in shape, would have a radius of less than a mile, which would enable all its industrial workers to be within walking distance of their work and of the open country, and an extensive rural community to have easy access to the markets and social attractions of the town.

The requirements of the several interests studied in the garden city formula are thus shown to be consistent one with another. Recognizing that there are variations of taste in urban allurements, and that the liking for comparative simplicity is a legitimate variation, it is convenient to suggest 30,000 as a minimum and 50,000 as a maximum population. Above 50,000 the need of internal transit would arise, without substantial compensations.

A plank in the domestic part of the peace program is a recognition that city conditions should be made more fit for democracy, that higher standards of living should prevail. The following is the gist of many statements appearing in the American press referring to these new standards.

We are convinced that in the new order American essentials in politics will be preserved, but that will not satisfy the new demands. We have made great demands upon citizens. As a nation can we not return anything to them? We can give them the things which make life worth while living — decent homes, cities clear of slums, children well fed, that they may be citizens well ordered, with fit bodies and active minds; cities which see the sunlight and do not

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live under a canopy of smoke. We can add to the decoration and adornment of life, to its amusements. We can help to better physical and esthetic conditions. We can raise the whole standard of life physically, mentally, and spiritually. We can give life more color and more interest. We can have more libraries and a wider distribution of music and art. We can have parks and forest preserves.

These are the things which confront the United States. There is a new order. It is the new order of the average man. It must suit his needs. It is not for the United States a new political order. We know that we shall retain our political structure. But it is a new order for real life in the United States. It must be more worth while to live here for the people who do live here.

A considerable number of publications have appeared recently, dealing with the new housing standards used during the war, and the proposals for the construction of new villages and towns after the declaration of peace. Among these, special mention should be made of *Standards Recommended for Permanent Industrial Housing Developments*, United States Department of Labor; *The Housing Problem in War and in Peace*, prepared by various authors for the *Journal of the American Institute of Architects*; the Report of the Committee Appointed by the English Local Government Board to Consider Questions of Building Construction and Methods of Securing Economy and Dispatch; *New Towns After the War*, *An Argument for Garden Cities*, by New Townsmen; *The Meaning of Reconstruction*, by Demos; *Village Life After the War—Being Special Reports of Conference on the Development of Rural Life*; *An Imperial Obligation*, by Thomas H. Mawson; and *Afforestation and the Partially Disabled*, by the same author. A *Selected Bibliography of Industrial Housing in America and Great Britain During and After the War* has been issued by the U. S. Department of Labor.

Chapter 10

Public Opinion and City Planning
Progress

To stimulate interest and make clear the need of city planning is an important part of the task of establishing new ideals and new standards. It is a publicity job, this work of making intelligible to the public generally what city planning really means. We must aim to get all who are interested in their community to see the planning of the city in its simple, practicable and financially advantageous outlines.

The making of public opinion for city planning is like making public opinion for pretty much anything else. It is done through the newspapers, by public exhibitions of plans, by moving pictures, if they can be made available, by the printing of reports, pamphlets and popular leaflets, by public meetings, illustrated lectures, the use of the stereomotograph and attractoscope, and free and wide discussion. One important thing to discuss is the financial results of city plans—that in a big sense, city planning pays. That might be the first appeal. The second appeal is almost opposite. It is the appeal to sentiment, to idealism, to loyalty to one's own community. It is surprising how quickly business organizations, such as Chambers of Commerce and Boards of Trade, respond on the ground that city planning promotes the city's welfare. The third appeal is to the imagination. It is the need of actual plans. It is necessary to visualize as graphically and attractively as possible various proposals for improvement, especially as related in comprehensive schemes. The final appeal is that of an object lesson, something actually

done, even though it is but a small part of the general plan. This involves the execution of a park, a playground, a garden suburb, a viaduct, a better type of bridge, a union station, a civic center—some feature, but with reference to the whole plan. Such an object lesson will often convince the most skeptical, even those whom the other appeals do not reach.

It is sometimes said that city planning schemes are not carried out. To some extent this statement is true. The execution of comprehensive city plans requires time—often a generation; also money—large sums; also authority—sometimes a change in the state laws or even in the state constitution; also the formation of favorable public opinion. Horace Bushnell, in his agitation for the first city public park in the United States, said: "Many things must be carefully prepared, as carefully watched, and persistently pushed, by the man who will get any city public into and through a great public improvement. Wearied, and worried, and hindered, he must never sleep, never be beaten, never desist, and if, by a whole five years of toil, he gets his work on far enough to become an interest in itself, and take care of itself, he does well, and there may rest."

The answers received from a questionnaire sent out recently to more than a score of cities, uniformly emphasizes the same conclusions with regard to the success or failure of city planning proposals. Careful examination of the responses shows that the degree of success is dependent on a regard for and adherence to certain principles. The solution of the whole problem seems to lie in a diplomatic, carefully planned, and if need be, a long extended campaign of education aimed to reach not only the well-informed and prominent elements of the community, but also the laboring classes and the public at large. In other words, the success of the commissions, from replies which were received, may be graded by the progress of such campaigns of education in their towns and cities.

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To one who is familiar with the natural and formidable obstacles to the execution of comprehensive city planning projects and the progress that has been made already, the astonishing thing is that so much has been done, especially in the smaller places. In some cases, as for example, Glen Ridge, N. J., and Walpole, Mass., virtually all the proposals have been carried out, or are definitely authorized for execution. In other cases—the city of Reading, Pennsylvania, is a good illustration—even though the city plan commissions were not able at the time to get the approval of their recommendations, the plans have been partially executed by the city council or other public authority. The words of Daniel H. Burnham have often proved true: “A logical diagram, once recorded, will never die, but long after we are gone will be a living thing, asserting itself with ever growing insistency.” Furthermore, the city planning movement, it should be recalled, is still in its initial stages. Its merits are not yet clearly understood by the general public, and very little money is available for the making of careful plans, based upon reliable surveys, and the publicity necessary “to sell” those plans to the people for whom they were prepared.

With the possible exception of Chicago, no town or city in the United States has yet taken city planning seriously. Chicago's methods have been more logical, more persistent, and more systematic than those of any other city. The whole story is convincingly presented in Walter D. Moody's recently issued book entitled “What of the City?” by A. C. McClurg & Company, with the subtitle, “America's Greatest Issue—City Planning, What it Is, and How to Go About it to Achieve Success.” Some of the main facts to record in the program to “put across” Chicago's City Plan are the following:

1. The printing of the report on “The Plan of Chicago” at a cost of \$85,000. This was in the form of a beautiful octavo volume, the very finest example of printers' crafts-

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manship. It contained 164 pages, and 134 drawings, charts and pictures, including 15 full-page, six-color drawings painted by the famous artist, Jules Guerin.

2. The publication of a booklet entitled "Chicago's Greatest Issue—An Official Plan." The basis of this publication was the *de luxe* Chicago Plan book, issued by the Commercial Club. Many of the drawings of the parent book were adapted to the smaller one. Its 93 pages, carrying the 328 names of the members of the Commission, representing every walk of life in the city, told the story of the Plan of Chicago to all the people in simple, easily comprehended, everyday language; 165,000 copies were issued and distributed at a cost of \$18,000. These were delivered to every property owner of the city, and to persons paying a rental of \$25 per month and over. "Chicago's Greatest Issue" was sent, on request, all over the civilized world.

3. A notable pamphlet was printed and issued, entitled "Fifty Million Dollars for Nothing." It showed the people of Chicago how they could obtain 1,300 acres of lake front parks, playgrounds and watercourses by utilizing the waste material of the city. It pointed out that by so doing, the city could secure in twelve years, park lands ready for development, and worth fifty million dollars, at no cost whatever to the tax-payers.

4. There were many other special pamphlets and reports, but, to cap all, the Commission issued a publication entitled "Chicago's World-wide Influence in City Planning." It was an effort to "keep the home fires burning" with community confidence and devotion to its own plan as it was regarded by the rest of the world. This was a compilation of comments and requests for Chicago Plan literature from hundreds of experts, civic workers, municipal authorities, libraries, schools and public-spirited citizens, received by the Commission from all over the world.

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5. Following the signing of the armistice in the great war, and the announcement of the reconstruction platform of the Chicago Plan Commission, to which the Chicago newspapers devoted twelve columns, an appeal was made to the clergy of the city to preach from their pulpits upon the humanitarian benefits of the Plan of Chicago. The Commission's "Seed Thoughts for Sermons" pointed out the close harmony between the social work in the churches and the benefits in the plan. This document, together with a resolution, and the reconstruction platform, was sent to every clergyman in Chicago.

6. As a direct result of the admonition, "Establish the Plan of Chicago with the People," a school text-book was printed, entitled "Wacker's Manual of the Plan of Chicago." This came as an inspiration. The Plan of Chicago text-book was adopted by the Chicago Board of Education in 1912. The first issue was 15,000 copies. It was used as a part of the curriculum of the eighth grade courses. The school authorities followed the wish of the Plan Executive, whose conviction it was that a larger number of students could thus be reached. It was believed, too, that there was value in an appeal to the children at their most impressionable age. More than 50,000 copies of Wacker's Manual have been published for the current needs of the school.

7. After the school book came the Lecture Bureau. A popular lecture, showing more than 200 pictures of twenty-four countries of the world, was most carefully prepared, and critics say it compares favorably with the popular lectures of the day delivered by professional speakers. The Board of Education placed the assembly halls of the schools at the disposal of the Plan officials without price. How to attract the people to the Plan of Chicago lectures was the task. The difficulties, however, were finally overcome. As many as 150,000 circular announcements of the lectures were mailed

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to citizens in a single season. Nearly a hundred school lectures were delivered in one year. The schools were selected in order, and to equitably cover the city. This method was continued from year to year, and during the first seven years of the Commission, nearly four hundred lectures were delivered; 175,000 people have been directly reached with the Plan message; that is, one in every fourteen residents of Chicago.

8. One of the chief aids to the effective publicity for the Plan of Chicago was a motion picture campaign. This consisted of a two-reel feature entitled "A Tale of One City." It contrasted the Plan proposals with existing conditions, and was interspersed with scenes of human interest and attraction about Chicago. The reels were shown in more than sixty Chicago theatres to an estimated audience of more than 150,000 people. The opening was at the Majestic Theatre to an audience which packed the house to capacity, and was as representative as a Grand Opera occasion.

9. The most valuable medium of all for publicity for the Plan of Chicago has been the newspapers. Publishers, editors, reporters, feature writers and cartoonists have coöperated intelligently, heartily and generously to carry to the people of the city the great ideas and the far-reaching benefits contained in Chicago's Plan. One of the papers prints daily at the top of its editorial column its platform, which contains a persistent endorsement of the Chicago Plan, and an appeal for its support. As Wendell Phillipps has well said: "The newspaper is parent, school, college, pulpit, theatre, example, counselor, all in one. Every drop of our blood is colored by it. Let me make the newspapers and I care not who makes the religion and the laws."

This is not by any means the whole story of Chicago's publicity, but here are given the nine main points. Chicago's publicity campaign on its great Plan has been big, far-reach-

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ing, inspiring and effective. Behind the conception of a city plan is recognized the necessity to stir the hearts of men, and to inspire in their minds that desire for better city conditions which are the fruits of well-executed city planning. Finally, it shows what is necessary to awaken the people to the need of city planning, and how they can be moved to action.

One question remains. Assuming that a publicity campaign is an indispensable feature of a city planning program, how can that campaign be best organized and carried out? Should the work be inaugurated and directed by the city planner, by the city government, by the city plan commission, or by some other body? The city planner is not a professional publicity man, and he is often—in fact, usually—not a citizen of the city for which the plan is prepared. It would seem that his contribution would necessarily be limited to the preparation, in as popular a form as possible, of his plans and reports, together with, perhaps, a personal presentation of those plans and reports to a public audience. After that, his active participation in a local educational campaign would be of doubtful expediency.

The city authorities, especially the city plan commission, should be relied upon wherever there is a well-organized city planning agency, to outline, direct and execute the educational campaign that must accompany any large city planning program. In no other way can the presentation be wide enough nor the discussion authoritative and far-reaching. The city planning authorities, however, cannot hope to be thoroughly effective unless they can secure the active coöperation of the voluntary social, civic and other groups of citizens. The whole public can be effectively reached only by the assistance of Chambers of Commerce, women's clubs, labor unions, Y. M. C. A., churches and other organizations to which the people of the city are accustomed in their daily life to look for information and guidance.

Chapter II

The Promise of the Future

Modern town planning in the United States may be conveniently limited to the plans that have been prepared, and the work that has been done for cities since the Exposition in Chicago in 1893. In fact, a distinct period is represented by the last quarter of a century.

The actual achievement of American cities in city building, in the sense in which that term is used in Europe, or in the laying out and construction of garden cities and garden suburbs, as the English town planners conceive them, is as yet relatively slight and unimportant. To many of us, however, the future appears full of promise. It promises well because we are now getting into direct personal and intimate touch with the practice and experience of European cities. We are also learning from our own direct observation of their cities and from the message which their leaders give us what to follow and what to avoid.

We realize, however, that if European experience is to be of value, we must know how to modify and adapt it so that it will fit American life and American conditions. In climate, topography, ways of working and playing, in traditions from the past and aspirations for the future,—in many respects, we are different from our European cousins. This being true, our cities should reflect these differences.

The principal American contributions to city planning, as compared with European countries, are the parks or systems of parks, such as those of Boston and Kansas City; the



ELEVATED RAILROAD, STEEL STRUCTURE

playgrounds, as in Chicago, Rochester, Hartford, and other cities throughout the country; the great development of electric, urban and interurban street car transportation, making possible the separation of business and residential neighborhoods; metropolitan planning in certain fields, as illustrated by the work of the Water, Sewer, and Park commissions of the Boston Metropolitan district; the wide residential streets with tree planting which is common to most American cities, and the relatively wide residence lots with detached or semi-detached houses. These have



ELEVATED RAILROAD, CONCRETE MASONRY VIADUCT

Compare the attractiveness of the masonry viaduct with the steel structure (page 125)

been the principal contributions, so far, of the United States in the movement for the better planning and the better building of cities.

WHY AMERICA LAGS BEHIND

European town planners are constantly asking, and properly so, why is housing not given more attention by city planners in America? One English writer said, "In America it is the fear of restricting or injuring free and open competition that has made it so difficult for cities to exercise proper and efficient control over their development. The tendency therefore has been to promote those forms of civic improvement which can be carried out without interfering with vested interests. To impose severe sanitary restrictions, to limit the height and density of dwellings, or to prevent the destruction of amenities on privately owned land, may all help to reduce the profits of the speculator—

hence if he has any influence over the local governing bodies he will secure that nothing but what is absolutely necessary and legal shall be done in these directions. But to purchase large public parks and to develop civic centres adds to the value of the privately owned land and buildings in the city. Insanitary homes are more bearable and good class residences will produce higher rents when they are adjacent to public open spaces."

The following are some of the reasons why housing has not been given more attention by city planners in the United States: (1) Until recent years, aside from great cities and other exceptional development, the characteristic houses in American cities have been relatively good, so far as city planning goes. The lots have been usually 40 feet to 50 feet wide, and 100 feet or more deep, with not more than eight or ten houses to the acre. (2) The rights and limitations of municipalities have been such that again, so far as planning goes, location, width, etc., of streets, the width and depth of lots, and character of houses have usually been determined before the outlying sections have been included within the city boundaries. (3) Public opinion generally was not and usually is not yet favorable to the public regulation and control of the layout and character of residential neighborhoods. It is indeed very difficult to make an advance even in sanitary requirements, reduction of fire hazard, etc.—administrative requirements which, in some respects, have claims in advance of broad city planning. There is a widespread feeling that public health matters of this sort should have first attention. The difficulty of doing these things is greatly increased by what is known as the rights of individual property and by the strength of vested interests. An eminent English town planning authority pointed out several years ago that American cities are very backward in matters of public health

—being probably 20 or 30 years behind England in public health legislation and administration. (4) On account of the federal constitution, which provides that private property cannot be taken except for a public use, and with due process of law and just compensation, it is very difficult and very costly to regulate or control the layout and character of residential neighborhoods. In many cases, the state constitutions contain the same provision. (5) The disinclination of private capital, except in the case of employers for their own employees, to respond to invitations and opportunities to invest in housing schemes on the limited dividend principle, is another reason why housing has not apparently been given more attention in the United States by town and city planners. Coöperation in housing, as in other matters, has not succeeded in the United States as it has in Europe.

Fire, flood, and earthquake are doing much to create a public opinion more favorable to the reasonable restriction and control of private property. The disasters at San Francisco, at Baltimore, at Galveston, at Chelsea, at Dayton, at Salem, are convincing people that it does not pay to permit the degree of freedom in the use of private property that has prevailed heretofore. There is also, happily, an increasing regard for the conditions under which wage earners live in town and city tenements, and an appreciation of the relation that housing has to the efficiency of workers and the conditions of family life.

WHAT THE PEOPLE WANT

The promise for the future is bright in this field of city improvement in the United States, because we realize that changes in our cities, if they are to be permanent and far-reaching, must spring from the people and be at bottom an expression of the life of the people. We do not want mere



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*One of the earliest examples of municipal provision
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experts' cities unless those various experts — engineers, city planners, landscape architects and architects — show themselves capable of expressing and interpreting the best impulses and highest conceptions of business men, of citizens, of wage earners, and of fathers and mothers and children. For true city planning must make cities that will serve the needs — physical, economic and spiritual — of all the people. A civic art that is to abide must not be art for art's sake, but art for life's sake; and if civic art is to rise high with us, it must have a broad base like the civic art of the Middle Ages, in which the whole body of the people were genuinely interested.

We in the United States have the reputation of being a patient, and in some ways, a long-suffering people. There is a reason for that reputation. But once aroused, we



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move, and quickly, toward practical results. When we are stirred in this matter, we shall not be content with a bright promise of cities, nor with visions, dreams, nor even paper plans. We shall insist upon the adoption of methods that will bring definite and satisfying results.

By what steps are we likely to get results? First of all, we must gather up the experience of our own land and that from abroad; but we must not merely talk about it, we must find ways to apply it. We must utilize the men who know and we must have repeated meetings and conferences and exhibitions for the comparison and communication of ideas. Then our cities must have broader powers.

NEW IDEALS IN THE PLANNING OF

There should be less coddling by state governments and more city self-dependence.

Broader legal powers should be accompanied by broader and better ideas of municipal finance. Much of our practice needs to be radically changed; some of it revolutionized. We are only beginning to apply sound, fair and equitable business methods to the raising and spending of the vast sums which are needed for a modern American city. Special financial methods, like excess condemnation and assessments for particular improvements, are beginning to get wider consideration and application.

If we are really to advance in city building, we must recognize afresh that changes in our practice can be brought about only by changes in public opinion. We must find more ways and better ways of forming intelligent public opinion and of giving it effective expression. Above all else, this is what makes the bright promise of modern town planning in America, for in this, I believe, we already lead much of Europe. There is nothing in Europe today that surpasses the widespread civic awakening among the people of the United States and of Canada. Almost anything is possible through the coöperative effort of such men as are now permanently pulling together toward definite ends in the civic and commercial organizations of scores of cities that might be readily named. These are the civic nerve centers. The promise of our American city planning is bright, because of this new spirit of democracy, this freedom, or new conception of freedom, of which town and city planning and development and better suburban building are, after all, only one meagre expression.

There have already been published a number of books and pamphlets of particular interest in connection with the future development of town and city planning. Special mention should be made of the volume by C. R. Ashbee entitled, *Where*

CITIES, TOWNS AND VILLAGES

the Great City Stands—A Study in the New Civics; also What of the City, by Walter D. Moody; A Community Center—What it Is and How to Organize It, by Henry E. Jackson; A Self-Ownng Town, a publication of the Committee on New Industrial Towns; Reconstruction with Particular Reference to Housing, a pamphlet of the English Town Planning Institute; and Town Planning Lessons from Government Housing Operations, published by the American City Planning Institute.

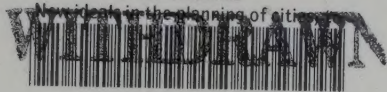
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New ideas in the planning of cities



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